National Petroleum News

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Amos L. Beaty, Head of Code, Dies Suddenly

N. P. N. News Bureau

NEW YORK, May 1.—Funeral services were held here today for Amos L. Beaty, former president of The Texas Co., and of the American Petroleum Institute, and one-time chairman of the Planning and Co-ordination Committee for the oil industry under the NRA code.

Judge Beaty, as he was more familarly known in the oil industry, died suddenly at seven p.m. April 29 at his residence here. He was 68 years old.

Born in Red River county, Texas, Sept. 1, 1870, he was educated at public and private schools in Texas. He was admitted to the Texas bar in 1891 and began practicing in Sherman, Texas, in 1892.

He entered the oil industry in 1907 with The Texas Co. as an attorney. In 1913 he was transferred to company's headquarters in New York, becoming general counsel, director and a member of the executive committee. In 1920 he was elected president, and in 1926 chairman of the board of The Texas Co. He resigned in 1927.

He re-entered the oil industry in 1929 as chairman of the board of Transcontinental Oil Co., which was later acquired by the Ohio Oil Co. In 1931, he became a director and a member of the executive committee of Phillips Petroleum Co. In November of that year he was elected president of the American Petroleum Institute.

Elected chairman in 1934 of the P. and C. Committee national code authority for the oil industry under NRA, he served from March until December of that year.

At the time of his death, he was in the oil business for himself with offices in New York.

Judge Beaty will also be remembered for his expounding of the "quotas in commerce" theory under which, he held, the federal government had constitutional authority to regulate the production of crude oil within the states. Mrs. Beaty, a brother, Robert Beaty of Annona, Texas, and two sisters, Mrs. R. P. Kelly of Seminole, Texas and Mrs. Robert Drake of Caddo Mills, Texas, survive.

Co-op Refinery Plans Are Approved

N. P. N. News Bureau

CLEVELAND, May 1.—Plans for construction of first co-operative oil refinery in U. S. and contract for 70-mile pipeline system to gather crude in Rooks and Ellis counties in Kansas were approved last week by Co-operative Refinery Ass'n., subsidiary of Consumers Co-operative Ass'n. of North Kansas City, Mo.

Location of refinery will be in northeastern Kansas, although exact site has not been revealed. Plant will cost approximately $450,000, plus about $260,000 for the gathering line. Its capacity will be 3000 barrels daily, including a polymerization plant and a 1500-barrel Dubbs cracking unit.

The refinery is planned to serve a portion of the requirements of the 400-odd co-operatives affiliated with the C. C. A.

Grand Jury Oil Probe Planned in California

By Teletype

N. P. N. News Bureau

WASHINGTON, May 2.—Five anti-trust attorneys from the Department of Justice are now enroute to Los Angeles to conduct a federal grand jury investigation of alleged price-fixing by oil companies operating on the Pacific Coast, it was learned today.

The department only yesterday released a statement announcing that such an investigation would begin "in the near future," outlining, very generally, the nature of the charges against the companies.

Gasoline prices, the justice department says, rose sharply in 1936 and have since "exhibited a stability without precedent" in the Pacific Coast area. There have been no reductions in the majors' posted prices for gasoline since April, 1936, the statement adds.

"These price advances," the statement declares, "have made the practices in the Pacific Coast Area the subject of complaints and government investigations extending over a considerable period of time. The complaints have charged that by resort to various practices all substantial competition in the marketing of petroleum products is being eliminated.

"A comparatively small number of companies occupy such a predominant position in the Pacific Coast oil industry, that concerted action to restrict competition may easily place in the hands of a few companies the power to fix monopolistic prices.

"Under such circumstances and in view of the well known importance of petroleum products, it is the duty of the Department to exercise extreme vigilance and to take vigorous action whenever it appears that current practices definitely restricting competition may be the product of concerted action," it adds.

Another Madison Case?

While the department gives little inkling as to what sort of "practices" it intends to investigate, it is known that some anti-trust division officials feel "we have another Madison case on the West Coast." In other words, they have indicated that some of the same charges in the Madison cases are involved in the California investigation.

Off and on for several years, the department has sent investigators to the West Coast to delve into marketing practices and quiz major and independent refiners. In the spring of 1936, the department requested the Federal Trade Commission to investigate and see whether the consent decree entered in an anti-trust case against certain California companies in 1930, was being complied with.

Following the FTC report on this investigation, the justice department, in the fall of 1937 while the first Madison oil case

FDR Backs New Roads Plan, Renting Sites for Stations

N. P. N. News Bureau

WASHINGTON, May 1. — Chairman Cartwright (Okla.) of the House Roads committee will introduce within the next week a bill to create a new agency to begin a long-range national highway program.

The Federal Roads Authority, which it would set up, could acquire rights-of-way and establish new through routes, as well as eliminate existing traffic "bottlenecks" and co-ordinate traffic in congested areas.

For fuller discussion of the proposed new national roads system, with map, see Page 30 of this issue.

The bill will follow the proposals of the Bureau of Public Roads, which were sent to Congress last week by President Roosevelt. Roosevelt said the report, which turned thumbs down on a system of transcontinental toll roads, emphasized at the same time the need of new highways "to meet the requirements of the national defense and the needs of a growing peacetime traffic of longer range."

Although discussion of financing such a system of roads as proposed in the report was vague, some indications of the plans under consideration for financing were indicated by the President's message, in which he called "the special attention of the Congress to the principle of 'excess taking' of land for highways."

Such 'excess taking' would, he said, eliminate the "unearned increment" going to property owners along the right-of-way of new highways, and would aid the federal government in paying the cost of the highway proper by selling or leasing land along the roads for concessions, such as filling stations.

In renting or selling sites for roadside establishments, the government would probably restrict the type of structures to be erected and, possibly, limit the number of each kind of business enterprise along the highway.

was being tried, launched its own field investigation on the West Coast. This investigation was headed up by Moses Huberman, anti-trust attorney who heads the department's delegation now enroute to make the presentation to the federal grand jury in the Southern California judicial district.

Working with Huberman in the preliminary investigation were Henry McClernan and Herbert Borkland, both anti-trust division attorneys. McClernan is going out for the grand jury investigation, Borkland is not—at least according to the department's present plans.

Others in the anti-trust division group on their way now to Los Angeles include Joseph Brill, Robert Marquis and Lawrence Sherfy, all attorneys of the anti-trust division.

Incidentally, anti-trust division attorneys who have had the most to do with oil cases in the past—such as W. B. Watson Snyder and John H. Lewin, who were active in the Madison cases—have had no connection with the West Coast probe, so far as could be learned.

* * *

'Reasons' For Probe Given in Statement

The Department of Justice will begin in the near future an inquiry before a Federal grand jury in the Southern District of California with reference to alleged monopolistic practices by oil companies in the Pacific Coast Area in the distribution of petroleum products. This statement is issued in accordance with the established policy of the Department to make public its reasons for instituting such an inquiry.

The major oil companies produce 84 per cent of the gasoline refined and distribute 85 per cent of the gasoline marketed in the Pacific Coast Area. In 1936 the price of gasoline rose sharply throughout the Pacific Coast Area, and it has since exhibited a stability without precedent in the area. By reason of two price advances in April, 1936, the majors' retail price for third structure gasoline in Los Angeles went form 7.5 cents to 12 cents per gallon, exclusive of taxes; on first and second structure gasoline the advance was 4 cents a gallon. At the same time prices on all three grades were raised 4.5 cents throughout the balance of the area. In March, 1937 the majors made an additional advance of 0.5 cent a gallon on all grades throughout the area. There have been no general reductions since April, 1936 in the majors' posted prices for gasoline.

These price advances have made the practices in the Pacific Coast Area the subject of complaints and government investigations extending over a considerable period of time. The complaints have charged that by resort to various practices all substantial competition in the marketing of petroleum products is being eliminated. A comparatively small number of companies occupy such a predominant position in the Pacific Coast oil industry, that concerted action to restrict competition may easily place in the hands of a few companies the power to fix monopolistic prices. Under such circumstances and in view of the well known importance of petroleum products, it is the duty of the Department to exercise extreme vigilance and to take vigorous action whenever it appears that current practices definitely restricting competition may be the product of concerted action.

"An earlier investigation by the Department, following complaints of monopolistic practices, resulted in the entry of a consent decree on September 15, 1930 against a number of the Pacific Coast oil companies. In 1936 the Federal Trade Commission at the request of the Attorney General investigated complaints charging that monopolistic practices similar to those which led to the 1930 decree were being resorted to. As a result of the facts reported by the Commission, the Department in November, 1937 undertook a comprehensive field investigation.

"The purpose of the inquiry before the grand jury is to present the facts obtained in the course of the investigations conducted by the Department and the Federal Trade Commission as well as such other facts as may appear to be pertinent, in order to ascertain whether prosecutions for violation of the antitrust laws should be had."

THURMAN ARNOLD,
Assistant Attorney General.

Approved:
FRANK MURPHY,
Attorney General.

Oil Hearing Pushed Back by O'Mahoney

N. P. N. News Bureau

WASHINGTON, May 1. — Chairman O'Mahoney of the Temporary National Economic (Monopoly) Committee has announced a schedule of hearings up "to the time of our summer recess," which is expected to be early in July.

Beginning May 3, the committee will hear a presentation by the Justice Department on beryllium, a strategic metal, following which Donald E. Montgomery, consumer counsel of the Agricultural Adjustment Administration will report on a study of consumer problems.

Next, the Securities and Exchange Commission will present its views on "the general subject of savings and investment".

Then the Commerce Department will discuss "cartels."

O'Mahoney concluded with: "The last hearing before the summer recess will be the first of the committee's industry presentations in which various industry groups are to be permitted to tell their stories to the committee. The petroleum industry is the first industry in this program, and different groups and individuals having conflicting viewpoints have agreed to participate in this presentation."

South Carolina Oil Probe Considered by Legislature

By Telegraph

COLUMBIA, S. C.—Observers here said today they saw little chance for passage by the Senate of the Concurrent Resolution, already passed by the House, providing for a joint legislative investigation of the oil industry in South Carolina.

Before the resolution was passed by the House an amendment was inserted providing that independent oil companies should be investigated in the same manner as other companies.

The original oil probe resolution declared that "certain practices, evasions and law violations (exist) which if not corrected will increase the cost of this necessity to the buying public, deprive the state of considerable revenue from the industry and threaten the future social security of thousands of workers—that there exists a very low price of gasoline—in a few spots in South Carolina and a very high price established by the same marketers in many other sections of the state, notwithstanding our law requiring that a commodity of like quality be sold at the same price in all sections of the state taking into consideration proper freight differential, also (that it is) the practice of certain marketers (to) grant purchasers differentials in the same locality."

On the floor of the House amendments were offered, and killed, providing for recommendation of laws by the Investigating Committee covering "absentee ownership of retail business," and making the investigation applicable only to those companies operating one or more stores, warehouses, bulk plants or service stations in the state.

Oil Burner Standards Redrafted

N. P. N. News Bureau

WASHINGTON, May 1. — Copies of a redraft of the proposed Commercial Standard for automatic mechanical draft domestic oil burners are being prepared for distribution to the industry for acceptance. Minor changes were made in the standard as originally proposed at a conference here last week between representatives of the industry and of the Bureau of Standards' Trade Standards division.

BULLETINS

Texas Commission's Chief Engineer Fired

By Telegraph

AUSTIN, Tex., May 2.—C. M. Langford, director of production in the Oil and Gas Division of the Texas Railroad Commission, has been dismissed by Chairman Lon A. Smith and Commissioner Jerry Sadler. Dr. F. V. L. Patton, chief engineer, was named Langford's successor.

Langford's memorandum to the Commission was the basis on which the new May and June proration order was written. He had testified recently in a Federal Court attack on a proration order, however, that he had counseled Smith and Sadler against a severe allowable reduction in certain pools. That order later was rescinded in part.

Rails File Low Rates on Illinois Crude

By Teletype
N. P. N. News Bureau

WASHINGTON.—Central Freight Association Railroads have filed effective May 7, tariffs publishing new low rates on Illinois crude to points in Western Pennsylvania (including Bradford and Warren) and New York, as well as to Cattlettsburg, Ky., and Kenova, W. Va., and to Michigan and Ohio points. (NPN March 29, page 37.)

New rates to the "oil regions" are 22 cents from the new Illinois fields (Centralia, Cisne, Beecher City, etc.,) to Cattlettsburg and Kenova, 13 cents, 16 cents to Detroit and Flat Rock, Mich., 17 cents to Alma, Mich., 13 cents to Cincinnati, Ohio and Latonia, Ky., 14 cents to Lima, O., 16 cents to Toledo and Findlay, and 18 cents to Canton.

Contracts Law Oil Ruling To Define 'Regular Dealer'

N. P. N. News Bureau

WASHINGTON, May 1. — A new Walsh-Healey regulation covering "regular dealers" and "refiners" and their employes for purposes of compliance with the Government Contracts Law will be drafted and submitted to the industry and to labor shortly by the Public Contracts Division of the Labor Department.

Decision to do this was the main upshot of the conference here last week between representatives of the division, of the oil industry, and of labor.

Although an elaborate agenda had been worked out, discussion at the conference soon narrowed down to whether a "regular dealer" should have all his employes covered up to the time of the delivery of oil to the government agency at local bulk stations, or whether coverage at the primary storage point, plus drivers making deliveries therefrom, would be sufficient.

It was argued that if the latter procedure were established, the dealer would be placed on a parity with refiners who are not now covered on deliveries from bulk plants because of the way the law is worded.

Under the Walsh-Healey law, contractors selling to the government must comply with certain wage and hour regulations as to their employes. It covers only contracts in excess of $10,000.

The government representatives at the conference indicated they felt a refiner retained his status as a refiner, even though he purchased a portion of his product from another refiner. It was pointed out by industry representatives that they felt this important, because if a refiner became a "regular dealer" under such an arrangement, the drivers making deliveries from bulk plants would be covered by the law.

It is these two points on which the division will draft the proposed regulation.

Government representatives at the conference were L. Metcalfe Walling, administrator of the W-H act, and William J. Grogan and Ralph J. Fogg, of the Public Contracts Division.

Oil industry representatives included L. P. Lochridge and Joseph P. Walsh, Sinclair Refining Co.; Austin T. Foster, Socony-Vacuum Oil Co.; M. E. Newcomer, Standard Oil Co. (Ohio); C. Henry Austin, Standard Oil Co. (Ind.); C. S. Gentry, Shell Union Oil Corp.; A. E. VanDusen, The Texas Co.; M. C. Mallon, National Petroleum Assn.; Charles G. Middleton and W. G. Violette, Standard Oil Co. (Ky.); E. S. Hall and L. W. Finley, Standard Oil Co. (N. J.); Harold Stone, Atlantic Refining Co., and Stanley Colburn, Cities Service Co.

Labor representatives included Miss Marie Evans, W. A. Calvin and John Frey, American Federation of Labor, and Thomas P. O'Brien, International Brotherhood of Teamsters.

Senate Passes Pollution Bill Leaving Out Federal Control

WASHINGTON, May 1.—The Senate today passed, with minor amendments, the Barkley "co-operative" stream pollution bill (S. 625), but only over the protests of Sen. Clark, Mo., and several others who held out for strict federal control.

Clark sought unsuccessfully to have his federal policing bill (Senate 1691) substituted on the floor for the bill of Sen. Barkley, Ky.

House Rivers and Harbors committee held hearings early in March on a number of pollution measures, but no report has yet been made. It is expected, however, that the committee will recommend and the House will pass a co-operative measure similar to the Barkley bill, and that any differences in the two bills may be ironed out in conference.

Most favored by witnesses at the House hearings appeared to be the co-operative measure of Rep. Mansfield, Tex., (H. R. 4314), which provides for a federal study of pollution, and loans and grants to states, cities and industries for pollution control. It is similar to the Barkley-Vinson bill which passed last year but was vetoed by President Roosevelt because of budgetary provisions. The objections of the White House are said to have been overcome in the new Mansfield measure.

Differences between the Senate-approved Barkley bill and the Mansfield measure are not great. The Barkley bill likewise provides for study of pollution problems, by the Public Health Service, and for loans and grants to states, cities and industries.

NPN's Log ON OIL LEGISLATION

Summarized oil legislative information below is based on reports received at Cleveland from Washington and state legislatures, which are deemed reliable although NATIONAL PETROLEUM NEWS assumes no responsibility for accuracy or completeness of this information.

Congress

H Con Res.-20, Treadway, Massachusetts.

To create a temporary joint committee on trade agreements. To Rules Committee.

S. 685, Barkley.

Provides for a co-operative program to abate stream pollution. Passed Senate May 1.

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State Legislatures

Bills Introduced

FLORIDA

HB-579, Codey.

Prescribing size of certain motor vehicles. To Motor Vehicles and Carriers Committee.

HB-610, Hillsborough.

Prohibiting unfair trade practices in the manufacture and distribution of petroleum products. To Judiciary Committee.

HB-675, Fuller.

Provides for the segregation of proceeds of tax on gasoline sold for use of water craft.

HB-758, Cities and Towns Commission.

Providing that no excise tax shall be collected or paid on gasoline and like products sold for exclusive use of municipalities. To Finance and Taxation Committee.

SB-394, Beacham.

Relating to conservation of crude petroleum and natural gas, prohibits waste thereof, and requires notice of intention to drill any well. To Calendar.

ILLINOIS

HB-881, Frielona.

Prohibits sale of motor fuel and lubricants at less than cost, to divert trade from competitors. To Judiciary Committee.

HB-889, Lawler.

Prohibits transportation of inflammable liquids in motor vehicles on highways in excess of 2000 gallons. To Roads Committee.

HB-897, Schnackenberg.

Requires motor fuel pumps to show price of product and federal and state taxes. To Judiciary Committee.

NEW YORK

S Res.-24, Mahoney.

Extending to May 6 the time for report of committee studying cost price of gasoline and other motor fuels. Adopted in both Houses.

* * *

Changed Status

COLORADO

HB-469. To regulate use of highways. Killed in House.

HB-39. Provides for excise tax on natural gas or manufactured gas transported into state for sale. Unfavorably reported in House.

HB-597. Prohibits transportation in quantities of more than 2000 gallons in other than certain vehicles. Unfavorably reported in House.

HB-822. Prohibiting transportation of gasoline on highways on Sundays or holidays. Unfavorably reported in House.

HB-987. Provides for tax on pipe lines. Unfavorably reported in House.

HB-992. Imposing additional franchise tax on corporations transporting oil by pipe line of 1% of gross receipts. Unfavorably reported in House.

HB-1091. Relative to inspection of gasoline, benzine, etc., and regulating sale, possession, use, and shipment thereof. Unfavorably reported in House.

HB-1226. Relating to excise tax on motor fuel, and providing for distribution of same. Unfavorably reported in House.

FLORIDA

HB-368. Regulating weight of motor vehicles and trailers. Unfavorably reported in House.

IOWA

SJ Res.-1. Constitutional amendment against diversion of gasoline tax funds. To Governor.

MASSACHUSETTS

HB-951. Prohibiting sale of motor fuel at less than established price. Killed.

HB-591. Prohibiting and penalizing sale of gasoline and other motor fuels at less than established retail price. Unfavorably reported in Senate.

MINNESOTA

HB-464. Extending the 4c gasoline tax to September 1, 1940. (As originally introduced had extended to 1941.) Amended as above, and approved by Governor.

MISSOURI

HB-330. Providing for 3.5c per gallon gasoline tax and 50% reduction in automobile registration fees, except commercial vehicles. Reconsidered and passed in House.

NEW JERSEY

SB-508. Providing for issuance of permits for vehicles exceeding load limits. Passed House.

NEW YORK

SB-556. Prohibits sale of motor fuel lacking certain minimum specifications. Recommitted in Senate.

SB-918. Requiring bonding of motor fuel distributors. Killed.

HB-2207. Continues for another year emergency tax of one cent per gallon on motor fuels. Favorably reported in House.

OKLAHOMA

HB-44. Exempting farm trailers

from license tax. Passed Senate.

HB-673. Extending delinquent date on auto license from April 1 to May 1. Passed Senate.

SB-298. $1 auto license fee for church-owned vehicles. Passed Senate.

SB-650. Relating to authority of corporation commission to revoke motor carrier permits for failure to comply with regulations. Passed Senate.

SB-296. Well spacing law. Killed in House.

PENNSYLVANIA

HB-316. Continues emergency gasoline tax to May 31, 1941. Second reading in House.

RHODE ISLAND

SB-206. Regulates price fixing, marking labels, and tax prices of motor fuels. Favorably reported in Senate.

SOUTH CAROLINA

HB-376. Chain store tax. Exempts filling stations which deal only in gasoline and petroleum products. Favorably reported with amendments in House.

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Bills Approved

PENNSYLVANIA

HB-885. Transferring $3,885,000 from motor license fund to general fund, provides for return. Approved.

RHODE ISLAND

HB-559. Defers registration of motor vehicles to April 1. Approved.

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Hearings on State Bills

NEW JERSEY

HB-263. Exempting state agencies from payment of motor vehicle taxes. Hearing set for May 1, indefinitely postponed.

Oil's WASHINGTON CALENDAR . .

Below are given the dates and notices of hearings, proceedings, new legislation, etc., which are of importance to oil companies. Notice is also given of regulations issued, interpretations of laws, new publications, etc., with information as to how readers may secure official copies of these.

HEARINGS:

Interstate Commerce Commission:

May 3—On ICC order to show cause why contracts filed with ICC should not be open to public inspection, why contract carriers should not be required to furnish information as to number and types of vehicles operated, commodities transported, tonnage carried, miles operated and other data.

June 5—On proposed rail rate cut on oil from N. Pacific Coast points to inland destinations in Wash., Ore., and Idaho. (Low rate suspended on plea of Northwest truckers.) Portland, Ore.

Temporary National Economic Committee:

June 1 (or before)—"Forum" for oil industry.

North Carolina Gasoline and Oil Inspection Board:

May 22—On changes in specifications for the three grades of gasoline marketed in N. C. "All interested parties invited to attend and present their views."

ARGUMENTS:

Interstate Commerce Commission:

May 15—On application of Standard Oil Co. of Louisiana for reduced rates from Baton Rouge refinery to points in Midwest and Southwest. (ICC Bldg., Washington, D. C.)

EFFECTIVE DATES:

Federal Power Commission:

July 11—Order 59, amending rules of practice under Natural Gas Act.

REPORTS AVAILABLE:

(To obtain following, write: Section of Publications, U. S. Bureau of Mines, Washington, D. C.)

MMS 712. "Motorists Burn Up More and More Bromine."

FINAL REPORTS

ARKANSAS

(Convened Jan. 9—Adjourned March 9)

BILLS ENACTED

HB-523. Permits evaporation allowance on gasoline transported in barges or by tank truck in lots of not less than 500 gallons in addition to tank cars.

HJ Res.-15. Amends Constitution to pledge that state shall not amend rate of tax on motor vehicle fuel so as to reduce revenue therefrom including motor vehicle registration, to less than $8,500,000. Will appear on 1940 General Election Ballot.

HB-16. Repeals motor vehicle inspection law.

HB-229. Establishes a Federal Aid Highway Fund and appropriates $3,000,000 building and repairing.

HB-596. Provides for payment of farm-to-market road bonds.

HB-623. Provides for refunding of state's highway indebtedness.

HB-483. Defines duties of chief boiler inspector in inspection and regulation of containers and equipment used in storage, transportation, dispensation and utilization of liquefied petroleum gases for purposes of providing gas for industrial, commercial and domestic uses.

HB-492. Provides crude produced in state shall be measured in gage-tanks. Pipe lines through which such oil is conveyed from oil wells to such gage-tanks shall be placed on the surface of the ground and no by-passes shall extend from such pipe lines between such oil wells and gage-tanks. This bill would not apply to oil wells in operation prior to the date of the passage of the bill.

SB-26. Creates an Oil and Gas Commission. Commission authorized to assess charge not to exceed 5 mills on each barrel of oil not to exceed one-half mill on each 1000 cubic feet of gas. Taxes apply to oil or gas discovered after January 1, 1937. Proceeds to be used for administration.

SB-3. Same as HB-16 above.

SB-76. Provides speed limit of 60 m.p.h. for passenger cars and of 40-45 m.p.h. for trucks.

SB-179. Removes from weight law special provisions relating to vehicles weighing over 10 tons and also provision which permits any police officer to weigh a vehicle if he suspects it is overweight.

SB-233. Appropriates $1,500,000 bi-annually from County Highway Fund for the benefit of counties.

SB-412. Authorizes state highway commission to purchase privately owned toll bridges.

SB-466. Provides that outstanding warrants issued by counties in excess of revenues received for the Highway Turnback or the County Three Mill Road Fund for the years 1937 and 1938 shall be paid by the County Treasurer out of ½c gasoline turnback funds, as of January 1, 1939.

SB-488. Provides for registration from November 1st to December 31st and permits governor to extend period 30 days. Present registration is from January 1st to March 1st.

SB-569. Requires issuance of certificates of title for motor vehicles, and payment of fees.

SB-552. Continues indefinitely present sales tax law which was to expire July 1, 1939.

SB-317. Provides that where royalties are paid in lieu of drilling offset wells, unit adjacent to unit receiving royalties shall become an offset unit. Also provides that when production is had in sand lower than sands known to exist in upper formations lease shall be cancelled to a depth of 200 feet above producing sands.

Bills Which Did Not Pass

HB-42. To reduce gasoline tax rate from 6½ cents to 5½ cents per gallon.

HB-134. To broaden law relating to tax rate in counties along border.

HB-147, SB-95 and 223. To impose a tax of 2 per cent on gross receipts from retail sales.

HB-476. To levy a tax of 10c per square foot of advertising surface on all billboards on highway right-of-way. No exemptions.

HB-34, HB-95 and SB-28. To allocate an additional ½ cent of gasoline tax to counties and provide that ½ of this amount shall be given to cities for streets.

HB-419. To provide for tolerance of 7½ per cent of axle loads and 10 per cent on wheel loads but subject to the legal maximum of 16,000 lbs.

HB-463. To limit the maximum truck load to 15,000 lbs. and provide for maximum allowable length of 25 feet for single truck and 35 feet for a combination.

HB-520 and 546. To provide for a maximum payload of 12,000 lbs. on any truck or truck tractor; 22,000 lbs. on any combination; and a gross weight limit of 40,000 lbs.

HB-665. To authorize State Highway Department to use any funds available for purpose of matching federal aid for farm-to-market roads.

HB-196. To amend section of stream pollution law relating to discharge of intoxicating, poisonous or stupifying substances in the waters of state by changing penalties for its violation.

HB-666 and SB-546. To impose a tax of 2 cents per 1000 cubic feet on all natural gas sold in the state upon which no severance tax is levied by Arkansas, which tax would be paid and absorbed by seller.

SB-60. To provide for a graduated gasoline tax in border areas—1 cent to 4 cents per gallon more than rate in adjoining state, depending upon distance from state line.

SB-136 and 23. To levy a ½ cent per gallon tax on gasoline in addition to the tax of 6½ cents .

SB-327. To grant motor fuel manufacturers and dealers a credit of 1 per cent for evaporation losses. Under present law 1 per cent is allowed only when handled in tank carlots.

SB-473. To require every person engaged in the manufacturing, blending, distributing, transporting, or selling of motor vehicle fuel to secure a license. Would prohibit transportation of motor vehicle fuel upon highways between 8 p.m. and 6 a.m. and require a special permit for delivery in other than railroad tank cars. Would also prohibit the mixing of fuel of one manufacturer with that of another.

SB-566. To prohibit evasion of motor vehicle fuel tax.

SB-385. To provide motor vehicle fuel shall be inspected to determine knock characteristic. Would prohibit sale of motor vehicle fuel of octane rating less than 60.

SB-98. To increase severance tax on oil from 2.5 per cent to 7.1 per cent.

SB-380. To increase the severance tax on oil from 2.5 per cent to 7.1 per cent and to impose a tax of $5 per acre on oil and gas leases of 160 or more acres in aggregate.

SB-289. Providing fees for highway billboards.

SB-4. To provide that fees for all passenger cars and trucks under 3 tons shall be 2/3 of present fees.

SB-44. To change registration date to January 1 with 30 days grace by governor's proclamation. Would also reduce license fees by one third.

SB-386. To establish specifications and tolerances for motor vehicle fuel tank trucks.

SB-374 and 499. To authorize State Fire Marshal to regulate the design and construction of containers, etc., for the storage and handling of liquefied gases and of tank trucks, etc., for their transportation.

* * *

KANSAS

(Convened Jan. 11—Adjourned April 3)

BILLS ENACTED

HB-619. Amends definition of motor vehicle fuels by including combustible gases used to propel vehicles on highways and provides for the licensing of manufacturers and importers of motor vehicle fuel. Approved.

HB-148. Permits the manager of any established airport, who is the holder of an exemption permit, to resell any motor-vehicle fuels purchased on such permit for use in airplanes, provided fuels so sold are delivered into the fuel tank of an airplane. April 3, 1939.

HB-121. Repeals provision relating to issuance of tokens and authorizes agreements by retailers to provide uniform methods for adding and collecting the tax. Approved March 23, 1939.

HJ Res.-6. Directs study of data collected by state highway planning surveys for the purpose of recommending state highway legislation. Approved April 3, 1939.

HB-616. Amends section of sales tax act relating to the distribution of moneys. Approved April 3, 1939.

HB-303. Requires proof of financial responsibility after failure to satisfy judgment arising out of a motor vehicle accident or after suspension of license. Approved April 3, 1939.

HB-517. Creates state commission

of revenue and taxation. March 30, 1939.

SB-185. Authorizes state corporation commission to determine reasonable market demand for crude oil and to allocate among pools in state the amount of oil that may be produced. Approved.

SB-346. Extends Interstate Compact to conserve oil and gas for period of two years from expiration date to September 1, 1941. Approved.

Bills Which Did Not Pass

HB-353. To grant allowance of three per cent, instead of two per cent, of total gallonage received to cover all ordinary losses and other expenses in handling motor vehicle fuels.

HB-226. To provide for licensing of persons engaged in selling at retail gasoline, kerosine, or other petroleum products for use as motor fuel; fee, $1.00 for each pump.

HB-5 and SB-51. To impose tax on chain stores.

HB-375. To impose tax on gross receipts for privilege of retailing tangible commodities and of producing oil.

HB-272. To provide specifications for motor and lubricating oils, including reclaimed oils.

HB-223. To require posting of one sign on dispensing apparatus showing actual total retail price, including taxes, per gallon of all gasoline or other motor vehicle fuel sold from the apparatus.

HB-310. To prohibit dilution, adulteration or commingling with different kinds any gasoline, kerosine, distillate or fuel oil which the manufacturer or distributor has established or advertised as of a certain grade, brand or trade name. (Present law refers to gasoline only.)

HB-155. To prohibit transportation in motor truck at night of more than 600 gallons of motor fuel.

HB-9 and SB-25. To require person desiring to drill any test well to obtain license fee, $10.00.

HB-27. To amend law relating to exemption permits.

HB-52. To provide for a system of refund permits in place of the present system of exemption permits.

HB-396 and SB-278. To impose a tax on the storage, use or other consumption of tangible personal property purchased from a retailer at the rate of 2% of the sales price.

HB-224. To provide for three grades of gasoline.

HB-81. To provide for $3 license fee for private passenger cars.

HB-95. To abolish ports of entry.

SB-462. To increase tax on motor vehicle fuels from three cents to three and one-half cents per gallon.

SB-75. To impose severance tax of three per cent of gross market value upon all crude oil and natural gas procured in state.

SB-412. To prohibit any person from directly or indirectly engaging in the transportation of petroleum products and at the same time be engaged in one or more of the other three branches of the petroleum industry, i.e., production, refining or marketing.

SB-131. To limit transportation of motor fuel in any single motor vehicle to 1000 gallons.

SB-407. To provide that all oil and gas royalty interests owned by others than owner of lands, shall be taxed as personal property.

SB-449. To provide for a system of refund permits in place of the present system of exemption permits.

SB-253. To provide a 12-hour day for truck drivers.

SB-272. To increase the mileage tax from 5/10 to 1 mill per gross ton mile on common, contract and private trucks.

Price-Posting Case Appealed In California

N. P. N. News Bureau

LOS ANGELES, April 29. — New arrests charging violation of California's gasoline price posting law have slowed down pending outcome of an appeal against conviction of a Los Angeles station operator several weeks ago. Under submission by the appellate division of the superior court, this test case is not expected to be decided for several weeks.

Of six dealers arraigned within the past week by Los Angeles county officials in charge of enforcing the Gasoline and Oil Substitution act, particularly Section 11-2 which prohibits sales at less than the actual price posted, four pleaded guilty and received sentences ranging from $10 or 5 days to $50 or 10 days. A $10 fine was paid by one operator and sentence was suspended in the other three cases.

Two defendants entered pleas of not guilty. One will have a jury trial May 22, the other a court trial May 5th.

Of three cases involving station operators in the city, two received sentences of $100 or 20 days and one of $25 or 10 days, all suspended.

No arrests have been made to date of operators charged with giving premiums, coupons, trading stamps or other items recently termed by California's Attorney General Earl Warren as "clearly a violation of Section 11-A" unless the resulting "discounts" were posted on vending apparatus as required by the law.

Attorney General's Ruling Hit

Direct exception was taken to the attorney general's ruling by H. Gregory Brilliant, attorney representing a group of southern California station operators opposing enforcement of the price posting law. Declaring it was contrary to previous court decisions which "sanctioned the giving away of premiums, coupons, gifts or similar items, and pointing to the use of these practices by other trades, he said the ruling was an evident attempt to "discriminate" against the petroleum retailer. A court test of this point is expected at an early date.

In his decision the attorney general listed coupons, punch tickets, trading stamps, verbal agreement and cash register receipts, as devices brought to his attention by enforcement officials and allegedly used to evade provisions of Section 11-A.

He said none of these "rebates" can be legally given without posting as required by this section. It was his opinion that the "operative effect of any such device used by a particular station, must be stated in terms of a discount in the price per gallon of gasoline sold, and such discount must be posted on the sign, provided for by the statute, upon the dispensing apparatus so as to show the total price per gallon of gasoline sold from such apparatus after allowance of the discount."

It was his further opinion that rebates or discounts given to purchasers of gasoline by use of any of these devices are illegal, no matter how they are advertised, if they are not posted.

Bill to Reduce Bond Gains in Wisconsin

MADISON, May 1.—Wisconsin's new gasoline tax bond bill last week was voted out by the Assembly judiciary committee with passage recommended. The bill has passed the Senate.

The bill, sponsored by the Wisconsin Petroleum Assn., calls for gasoline distributors to post a bond, to insure payment of the gasoline tax collected for the state, in the amount equivalent to the highest tax paid in any month, with a minimum bond of $1000 and a maximum of $100,000.

The present law requires distributors to post a bond of not less than twice the amount of the highest monthly gasoline tax payment.

Canfield Files Stock Issue

N. P. N. News Bureau

WASHINGTON, May 1.—Canfield Oil Co. has filed application with Securities and Exchange Commission to register 4480 shares of $100 par value 6 per cent cumulative preferred stock, issued, on the Cleveland stock exchange, the SEC announces.

Fire Marshals Meet in June

WARREN, Pa., May 1.—The 14th annual meeting of the Fire and Safety Marshals department of the National Petroleum Assn. will be held at Hotel Schenley, Pittsburgh, June 6 and 7, according to C. H. Lindberg, of The Conewango Refining Co., president of the department.

An Open Invitation—

The Virginia Oil Men's Association extends a cordial invitation to all interested in the petroleum industry to attend its annual convention.

May 11th and 12th

John Marshall Hotel, Richmond

Prominent speakers, nationally known, will talk to us on current subjects.

Marketing problems, legislative subjects and other pertinent topics of interest will be on our program.

Golf tournament . . .

Banquet and Dance . . .

Will wind up this two-day meeting.

This advertisement is carried by National Petroleum News with the best wishes for a successful convention—Editor

National Petroleum News

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"P. & L." Facts For All Divisions Should be Boon to Oil Industry

By WARREN C. PLATT, Editor

One of the fundamental aims of modern accounting is to disclose, if possible, whether each business operation, no matter how small it may be, is producing a profit or a loss. This, to the end that if it be a loss, the operation can be improved or discontinued, and if a profit perhaps the profit can be increased.

The persistent and intelligent application of this fundamental of accounting has been the chief means through which efficient companies have not only grown but have been preserved when they have reached large size.

For many years, dating back to the early days of the Federal Trade Commission, the idea of better cost accounting has been pushed by government and trade association authorities as one of the means, at least, through which price cutting could be reduced and all industry stand a better chance of being maintained in a profitable condition.

While the oil industry has followed the best of accounting practices and the American Petroleum Institute long ago reported accounting standards, the major and integrated oil companies never set up on their books an accounting of division or departmental profit and loss, or, if they did, they never made that set-up public even to their stockholders.

Failure of the major companies to do this has, in the opinion of many, been conducive to not only many profitless marketing operations but of the industry continuing a most uneconomic price structure that is imposed on a practically non-existent tank car "market" price of the few remaining small Independent refiners still selling unbranded gasoline to private brand jobbers.

Now comes the O'Mahoney Temporary National Economics Committee and asks 40 major oil companies to produce this information, as to the profit and loss of their several important divisions, such as producing, refining and marketing. The committee calls for much other information the study of which should be of great value to all in the industry and probably should be the means of setting at rest many rumors and false conceptions of major company, as well as small company, operations.

Whether all of the 40 major companies have their books so written that they can supply this breakdown is not known. Report however has been for some years that some of them at least were keeping an accurate check on their divisions and from the substantially successful operations of some of them, one could well imagine this to be the case.

Majors Free Enough with Other Data

While it is natural that every American dislikes to have his hitherto private information disclosed to the general public, the details of American business are being more and more impressed with public importance, with the public feeling that it has increasing reason for demanding all the facts. All companies have been giving their stockholders as well as the public more detailed information each year, the only limiting factor seemingly being what information will give the average uninformed stockholder or citizen a true picture.

Major oil companies have been as free with their company information as other large companies but they have stopped short of disclosing this departmental breakdown. The argument is often made that in no other industry do the companies break down the profit and loss, if they have it, for their mining, manufacturing or sales departments. Oil executives have used this argument. However, it can be pointed out that perhaps in few other large industries has there been such a sharp natural division for years in the operations of those industries' several departments.

Ever since the beginning of the oil industry we have had a crude oil "market price". In fact it has only been in the past score years that the big Standard companies did not buy all of their crude oil supplies in this market and hence were like all other refiners starting their cost figures on the same level as their competitors, the pipeline price for crude oil. As newcomers to the oil industry developed and grew big they ignored this crude oil price, since which time the competitive troubles of the big Standard companies have greatly increased.

Then, ever since the beginning of the oil industry, we have had a definite and clearly ascertained kerosine tank car market followed by a similar gasoline tank car market FOB refineries. This last grew to great size for the first score of years of the gasoline era. This gasoline tank car market set a top limit above the pipeline price for crude oil for refinery operations and this same tank car price set the base for the marketing operations of big and little companies.

When this gasoline tank car market price was disregarded by either large or small company severe competitive conditions and generally profitless prices resulted. In fact one outstanding reason for the existence of so many competitive marketing units in the Standard of Indiana territory today is unquestionably the fact that a previous management of that company undertook for some years to arrive at its retail sales prices on a "cost plus" basis. At that time the refinery price was unprofitable except for one equipped with new cheap crude. The result was a set of retail prices over those western states that produced excessive margins, so excessive that they attracted a large number of new marketing units into business. This finally caused the Independent jobbers openly to force the hand of the old Standard of Indiana management by posting lower prices but which conformed to the Independent refiners' tank car market price, ruinous though that might be to the refiners.

The Standard of Indiana's present management, as was

testified in the Madison oil case, undertakes to base its wholesale prices on the Independent refiner's tank car market, the price at which its marketing competitors buy.

So the oil industry has a history and a justification for maintaining separate profit and loss figures for the industry's major operations that may not be found in other industries.

It has been argued for a dozen years or more by NATIONAL PETROLEUM NEWS that separate accounting of profit and loss would be of great value to all oil companies and to the industry in general, as well as fairer to competitors and more profitable for stockholders. We of NPN have argued that it would help the top executives in managing the business; that it would give the head of each division a more independent status in the operation of his department and particularly would afford him full opportunity to make what every man of ambition always wants to make and that is a showing of his real ability to shine before all business men in the only way a business man can be judged and that is by making a profit.

NPN has argued that by placing each department on its own profit and loss basis the eternal cry heard in the oil industry for "gallonage and more gallonage" would be silenced by the disclosure of the red ink that has resulted from that policy. Also, we have argued that this separate accounting would at once put in the hands of the chief marketing executive the very ammunition he would need not only to control the operation of his own department but to battle any too-ambitious a policy of refining or producing department which last departments have sometimes sought to "reduce their costs" by increasing their through-put regardless of whether the sales department could sell the increase at a reasonable price or not.

NPN has also argued that this separate cost accounting should be carried on down as far into the marketing operation as possible, to the end that every man whose decisions can affect price will be measured exactly as to the profit or loss that may come from the exercise of his discretion, and to the end that such men will be rewarded or penalized according to the profit or loss that may result.

But our voice echoed unheeded. Marketing officials, Independent refiners and jobbers who were so adversely affected by this unbusinesslike policy, seemed to the little concerned about a perfectly simple and legal way to give fundamental correction to some of the industry's greatest evils, foolish marketing practices and unprofitable prices.

Producers Take Up the Fight

It finally remained for a group of Independent oil producers, the Independent Petroleum Ass'n. of America, C. F. Roeser of Fort Worth, president, to catch onto the idea, which they did this last winter, and to realize that it was a perfectly simple, easy and entirely legal way to at least start to put the industry on a sound price accounting basis. No new legislation was necessary to get it going, only education, for certainly, no company or its executives is going to point "with pride" to an overall profit that may come at least partly from the bounties of nature, large oil wells, while other operations shriek loudly in red ink for help?

The oil industry has been hearing considerable of recent years about "divorcing" marketing, refining, producing and pipelines, in order to make each of these divisions stand on its own profit and loss showing. All the time there has existed the means of getting these profit and loss statements by moral and by government persuasion.

For nearly 20 years the Interstate Commerce Commission has had the figures on pipeline operation, as well as the authority to change those figures by ordering new, and if it saw fit, lower pipeline rates into effect. The Federal Trade Commission has much authority to look into oil company books especially when asked by Congressional resolution. Of late years, we have had the Securities and Exchange Commission which seems to have power to order most any type of bookkeeping that will help the American stockholder to get a more accurate picture of what he owns.

Turning to these existing government agencies would not have cost anything and there always was the chance that immediate publicity might correct at least some of the evils charged.

One might also well wonder why a great victory of previous years was not availed of?

We cite the battle which gave the Interstate Commerce Commission complete authority over the pipelines and their rates. That battle was started by Independents back in Pennsylvania who finally got a law through Congress seeking to make pipe lines in interstate commerce, common carriers. That battle won, the Independents turned to other matters and other wars. But in the course of a few years the attack was renewed by Independent producers of Oklahoma and refiners and the few jobbers elsewhere, with NATIONAL PETROLEUM NEWS lending aid and comfort with many pages every month devoted to the fight.

The Department of Justice first made a thorough investigation and urged the Interstate Commerce Commission to take jurisdiction. The Commission did and carried on a lengthy and public investigation collecting much data to show that the existing pipeline rates were extremely profitable, returning the equal of the investment every few yars. Th pipelines attacked the authority of the Commission but the authority was finally upheld by the United States Supreme Court.

Victory Over Pipelines Forgotten

At this point the Independent oil men again turned to other things and for more than a dozen years the pipeline rates, while much condemned, were never attacked before the Commission until the Standard of Ohio and the National Refining Company complained several years ago. Then the pipeline companies began reducing their rates until today those reductions have amounted to some 40 per cent and the case is still pending before the Commission.

Had any citizen of this country thought he was being injured by these old pipeline rates which so obviously were high, all he had to do was to write the Interstate Commerce Commission about them and, on a showing of real interest in the matter by the complainant, the Commission would have proceeded to see if the rates should not be reduced. Undoubtedly the Commission would have asked for more than a single letter of complaint because we happen to know that some members of the Commission felt they had been left out on the end of a limb, at great expense of time and money by the Independents of the previous battle. But the Commission has an excellent record of giving attention to serious and reasonable complaints, and a complaint from any one or several jobbers' associations would undoubtedly have been given careful consideration.

When no attempt whatsoever was made by Independents to take advantage of the victory over the pipelines, we of NATIONAL PETROLEUM NEWS were keenly disappointed as we felt we had fought one of the best educative campaigns ever waged in this oil industry. Naturally we have been a bit skeptical of crusades ever since, especially when they seemed to be adopting unnecessarily long, and even hopeless, ways.

As to the new slant which the O'Mahoney committee's investigation has just taken, we believe it will work to the benefit of all in the industry. It should help high executives of the big companies to see more clearly why some, at least, of the difficulties of the industry have existed and it will point the way to correct them. It should help to put oil marketing on a firmer and more reasonable basis for all, which will be welcomed by the small companies.

We hope the O'Mahoney committee fully realizes its opportunities for doing this oil industry real good by seeing that this investigation is conducted in a fair and unbiased way and does not let it become a "witch hunt" for which some in Washington have become so well known.

OIL TRANSPORTATION NEWS

Latest developments in freight rates, legislation, taxes, regulations, and new construction affecting the transporting of petroleum products by truck, barge, tanker, pipeline, and railroad.

Hearings Set on Rate Cuts From Mid-Continent Points

By Teletype
N. P. N. News Bureau

TULSA, May 2.—The Executive Committee of the Southwestern Freight Bureau will hold public hearings beginning May 3 on three proposals for reduced rail rates on petroleum products from Mid-Continent Refining Centers.

Proposals calling for reduced rates between Oklahoma points and Oklahoma and Kansas (S.W.F.B. 16271) and from Oklahoma and the Texas Panhandle to Colorado destinations (S.W.F.B. 16284) were given some consideration at a meeting April 28, but were referred to the May 3 hearing. Representatives of 2 or 3 so-called "pipeline refiners" indicated at a standing rate committee hearing recently that while reduced rates might be necessary, those proposed were unnecessarily drastic.

Santa Fe Railway Company's reduced petroleum rates from Texas Panhandle and New Mexico origin points to New Mexico destinations are scheduled to go into effect May 10 unless someone asks for suspension of the new rates. No requests for suspension are reported to have been received as yet.

Hearing on Trainload Rates

Docket 16460 calling for volume rates on petroleum products shipped from several Mid-Continent points to the Twin Cities will also be heard May 3. This proposal calls for 7.5 cents cut reduction in gasoline rates and a 6 cent cut in rates on low grade oils shipped to one consignee in lots of 40 cars or more. Reduced rates would partially meet competition from pipeline and water transportation, it was said. Several refiners say the proposal discriminates against small-lot shippers. (See N.P.N., April 19, Page 9, for details on "trainload" rate proposal.)

TVA Report Cites 'Discrimination' Against Shipments from Southwest

N. P. N. News Bureau

WASHINGTON, May 1. — Shippers in Southern and Western regions of the United States must pay higher rail transportation charges to market their products in the East than the rates which Canadian shippers have to pay to send their goods to the same markets, Tennessee Valley Authority officials have reported to President Roosevelt in connection with a study of the interritorial freight rate problem conducted at the request of the President.

The report was supplemental to an earlier report to the President (May 1937), which advocated abolition of interritorial freight rate differentials over the country as discriminatory against the shippers of the South and West. The report showed that shippers in these areas are at a "substantial competitive disadvantage" in shipments into Official Territory (roughly that portion of the country east of the Mississippi and North of the Ohio and Potomac Rivers), where 51 per cent of the nation's consuming population resides.

The advantage of Canadian shippers over the Americans in the south and west was brought out in the latest, supplemental, report, which comments:

"It would seem that the contiguous territories of the United States south and west of the Official Territory at least should enjoy the same opportunity insofar as transportation charges are concerned as is granted by the carriers to producers in the adjacent territory of eastern Canada."

The report also points out that the recent revisions upward on a percentage basis of all freight rates in the country, "has accentuated the discrimination" against shippers in the South and West, since any application of percentage increases to a higher rate results in a greater dollars-and-cents increase than such application to lower rates.

ICC Calendar On Oil Trucking

HEARINGS

O. L. Harvey Truck Service, Seminole, Okla. May 22, Indianapolis, Ind., on application to extend operations as a common carrier of oilfield equipment and supplies in Mich., Ind., and Ky. over irregular routes.

S & H Truck Co., Brazil, Ind. June 5, Indianapolis, on application to extend operations as a contract carrier of petroleum and products in Ill., Ind., Iowa, Kans, Mich., Ohio and Ky. over irregular routes.

J. M. Giddings, North Springfield, Vt. July 3, Montpelier, on application to extend operations as a common carrier of petroleum products, etc., in Mass., Conn., R. I., N. H., Vt., N. J., N. Y., Pa., Ohio and Mich. over irregular routes.

Railroads to Permit Names on Tank Cars

N. P. N. News Bureau

WASHINGTON, May 1.—Association of American Railroads has amended its rule governing markings on privately-owned railroad cars so that tank cars will be eliminated from the "no advertising" restriction.

Last November the rails issued the rule, barring advertising from all privately-owned cars, other than the "home point" of the car owner or lessee, a trademark or symbol, or the name of the owner or lessee.

Now the AAR has reversed the ruling (made at the suggestion of Interstate Commerce Commission) as it applies to tank cars, since they come under the designation of special cars which the roads do not obligate themselves to furnish.

1200-Gallon Bill Dies As Iowa Legislature Quits

DES MOINES, May 1.—The Iowa legislature adjourned late last week without passing measures that the entire industry had been watching.

The bill to require 10 per cent of alcohol, from Iowa farm products, in gasoline sold after Jan. 1 died in committee.

The bill to limit truck transporting of gasoline on the highways, to a 2000 gallon load, was killed by a vote on the floor of the Senate.

Several bills were in the house to tax chain stores, and all were killed in committee, so the famous 1935 chain store tax law is still in effect.

Oil Barge Employes Held Not Exempted By Wage-Hour Law

By Teletype
N. P. N. News Bureau

WASHINGTON — Employes on non-self-propelled oil barges are not "seamen" and thus are not exempted from the wage-hour law, according to an interpretative bulletin by the Wage-Hour Division.

Seamen, to be exempted under the act, must perform a service "rendered primarily as an aid in the operation of such vessel as a means of transportation," it was held.

"Employes on lighters and other barges which are not self-propelled ordinarily are not within this exemption," the Division says. "Their duties require them to supervise the loading and unloading of the vessel (not operation of the vessel) however employes on seagoing barges who are working under seaman ratings required by law, would seem to be employed as seamen."

The exemption for employes engaged in service of operating the vessels, the Division rule, applied to "employes performing such services on vessels navigating inland waters as well as on ocean-going and coastwise vessels."

'Inland Empire' Rates Set for ICC Hearing

N. P. N. News Bureau

WASHINGTON, May 1.—An Interstate Commerce Commission examiner will hold hearings at Portland, Ore., June 5 on the proposed cut in rail rates on oil from North Pacific Coast points to inland destinations in Washington, Oregon and Idaho. The low rates filed by the rails, to meet barge and truck competition in the Columbia River area, were suspended on protest of Northwest truckers last month (NPN April 12, page 16).

Oil L-C-L Rates Suspended

N. P. N. News Bureau

WASHINGTON, May 1.—Suspension of proposed reductions in rates on less-than-carload rail movements of petroleum products in the south has been continued to Aug. 13 by Interstate Commerce Commission, which suspended the proposed rates on protest of truck operators. The investigation into the proposal cannot be concluded before August, the ICC said in continuing suspension.

Committee Hints Limitation on Connally Law

Advisability of Permanent 'Hot' Oil Law Questioned by Some Committee Members

N. P. N. News Bureau

WASHINGTON, May 1. — Rep. William P. Cole, Md., chairman of the "oil subcommittee" of the House Interstate Commerce Committee, told NATIONAL PETROLEUM NEWS today that he may call a meeting of his subcommittee this week to decide what to do about extending the Connally "hot" oil law.

Cole's subcommittee held three days of hearings last week on the bill (S. 1302) of Senator Tom Connally, Tex., which would make the "hot" oil law permanent. Observers at the hearings drew the inference from committee questions and other expressions that it is likely the bill will be amended to provide for a definite extension —two or three years probably— before it is reported out of committee.

Paul E. Hadlick, secretary of National Oil Marketers' Ass'n. and one of the "hot" oil law's chief opponents, said he was hopeful of developing sufficient opposition to the measure on the floor of the House to keep it from passing. He added he is confident that there will be many more votes against extension of the law at this session than there were two years ago when it was extended to June 30, 1939.

The bill passed the Senate several weeks ago without hearings and without a record vote (N.P.N. March 29, p. 27).

Cole said today that he and other members of the subcommittee may be tied up all this week by hearings on general transportation legislation before the Interstate Commerce Committee, but that if an opportunity presents itself for a meeting of the subcommittee to discuss the Connally law extension, he will call one.

Besides Cole, other members of the subcommittee are Reps. Kelly, Ill.; Wolverton, N. J.; Mapes, Mich., and Pearson, Tenn.

Connally First Witness

Sen. Tom Connally, author of the "hot" oil law was the first witness at the hearings, contending, among other things, that the necessity for renewal of the law each two years had an "unsettling" effect on the industry.

Asked by Rep. Cole if he considered the "hot" oil law a conservation or a stabilization measure, the Texas Senator said that "naturally, any measure to conserve would tend to stabilize," and added that "my primary concern is to conserve."

The Senator said that the law had resulted in the conservation of 2,000,000,000 more barrels of oil than would have otherwise been recoverable, thereby insuring a lower price in the future than if the reserves started drying up.

"Don't you think," Connally asked the committee, "that it's a good idea to conserve an exhaustible resource, even though it may have some effect on price?"

If the oil industry is charging the public too much, however, Connally said in response to committee questioning, the O'Mahoney monopoly committee and the anti-trust Division should investigate the charges.

Without the Connally act, the Senator said, the producers would not be able to get a fair price for their oil, and the "owners and producers of this oil have some rights."

Later in the hearing, Hadlick picked out this bit of testimony and told the committee that the independent marketers, too, had rights, but that continuation of the "hot" oil law was taking away their rights for the benefit of the producers.

Rep. Wolverton, a subcommittee member who took an active part in questioning of witnesses, questioned the advisability of making the act permanent, during Connally's testimony, pointing out that if conditions change it is much easier to let a law lapse at a given date, set by law, than to repeal a permanent statute already on the books.

Chairman Cole also challenged the advisability of including Section 2 of the proposed permanization measure, declaring that if its sole purpose was to "offset some cockeyed decision in South Texas, I don't think we ought to fool with it."

Section 2 would make permanent by law the criminal provisions of the original Connally law, so as to obviate, according to Senator Connally, the possibility of such decisions as that of Federal Judge Kennerly of Texas several months ago quashing indictments against two defendants charged with violation of the law because the original law had expired. (N.P.N., Jan. 11, P. 18).

Rep. Pearson, Tenn., newest member of the Cole subcommittee, asked Connally if there were anything in the bill which would "tend to strengthen the monopoly which has grown up in the oil and gasoline industry," and the Senator said he thought not.

Boren Appears

Rep. Lyle Boren, Okla., also appeared to urge passage of the bill, holding that it has been tried and "proved satisfactory," and that no system of conservation has been offered by opponents as a substitute.

In refutation of assertions that it was a stabilization measure, Boren pointed out that inventories of crude oil have increased since first enactment of the Connally law, whereupon Rep. Wolverton asserted that it "seemed elemental," nonetheless, that to reduce the supply would cause an increase in price.

Boren said he differed from Sen. Connally with regard to imports and exports, and said that imported oil "strikes at the domestic oil which costs most to produce," oil from stripper fields.

Boren said that he felt it would be just as desirable to have the allowable set by the federal government as by the states. The main purpose of the Connally law, he said, was to apprehend the man breaking state laws.

Rep. John M. Coffee, Wash., told the committee that the Connally Act is a "stabilization" law, and that conservation is only incidental. Coffee also advocated rescission of the "tariff" on oil, and said, "if we're interested in conservation, let's let imports in free and embargo exports."

Coffee said he had talked to Interior Secretary Ickes only a few weeks ago, urging him to report unfavorably on the Connally bill, but that Ickes refused. He quoted the secretary, however, as favoring the elimination of oil tariff walls and embargoing of exports. Asked why such a bill was not offered congress, Coffee said Ickes replied "the major oil companies won't let us."

Russell B. Brown, general counsel of the Independent Petroleum Ass'n. of America urged "permanization" of the law, holding that while the price of almost every other important commodity is now selling at approximately the 1926 level, petroleum products prices are only about 50.4 per cent of 1926 prices. "Had the 'hot' oil law been a price-fixing measure, it might have been expected that the price of petroleum and its products would have advanced with the other commodity prices," he said.

Fayette B. Dow, appearing as general counsel of the Pennsylvania Grade Crude Oil Ass'n., also favored the bill, asserting that his association takes the position that "conservation to prevent waste is properly a function of the state. The federal government's part, under the Connally Act, is regarded as a sound and constructive measure."

Dow also pointed out that most of the production and refining in the Pennsylvania region was in the hands of "small independent oil producers and refiners," who, despite the much higher production cost in their area, where wells produce only a small amount of oil per day, are able to compete with the flush production areas on all products.

A. G. White, chief of the Petroleum Economic Division of the Bureau of Mines, explained the method of making monthly forecasts of demand, and pointed to the fact that they were within 1 per cent of actual demand in 1938. He praised the oil industry for its co-operation with the Bureau's set-up.

Other witnesses in opposition to the measure were John D. Glass, former Interior Department investigator in East Texas, and William J. Kemnitzer, petroleum economist and author of the book "Rebirth of Monopoly," which, he said, Hadlick had purchased in quantity for distribution to members of Congress.

Kemnitzer urged that the act be allowed to lapse, contending it was a price-fixing measure. He challenged the 2,000,000,000 barrel figure used by Connally in estimating the amount of recoverable oil saved under state conservation laws reinforced by the Connally Act. Kemnitzer said "no such computation can be made."

The author likewise attacked the Bureau of Mines forecasts, figures for which he said come from the oil industry. Why should the federal government, he asked, have to depend upon the industry for its figures?

Glass, who recently brought suit against Interior Secretary Ickes charging libel, said he felt there was no longer any need for the "hot" oil law, particularly in East Texas, which

is the only field in which it is being enforced. If the law is extended, he argued, then it ought to be made to apply to all other producing areas alike, with the same regulations for all producers.

Turning to statements made in support of the bill, Glass said that the I.P.A.A. was "major controlled" despite its name, and intimated that other supporters of the law were only looking out for the big companies' interests.

Glass said the law had served a "good" purpose, but that the need for it was gone, as the states have production under control and no "hot" oil has been shipped for some time. The only necessity for the law now, he said, is to "maintain the personnel" of the Petroleum Conservation Division.

For this reason, he said, "probably the most important major oil company lobby exists in the Interior Department," and cited trips made by PCD officials to appear before state legislative committees considering conservation laws.

Hadlick, too, took up this theme, and said he couldn't see why the taxpayers' money should be spent to send these men out lobbying for state laws. Hadlick also said he failed to see where the federal government has any right to issue a forecast to aid industry, which, if the industry issued it, would be in violation of the anti-trust laws. He cited the decision in the "Hardwood Case" in this connection.

The N.O.M.A. secretary told the subcommittee that the Madison oil cases were based upon the Connally Act, and that had it not been for conservation statutes, the "hot" oil law, and Bureau of Mines forecasts, the alleged violations of the anti-trust laws would not have been attempted. Chairman Cole asked the witness if it was not true that Interior Department figures were helpful to the government in setting up its case.

"No, I do not think so," Hadlick answered, "I would say rather that the cases were prepared and tried in spite of, rather than with the help of, the Interior Department."

At the close of the three-day hearings, two statements in opposition to the law were filed—by W. L. Tyndall, secretary of the Schock Independent Oil Co., Mount Joy, Pa., for Clarence J. Schock, owner of the company, and by Richard E. Breed, 3d, Baltimore jobber. A statement in behalf of the bill was filed by Thomas Keefe, representing the American Motorists' Ass'n.

Earlier in the hearings, letters from Ickes endorsing the law were put into the record.

FTC Orders Tire Company To Stop 'Discriminations'

N. P. N. News Bureau

WASHINGTON, May 1. — A cease and desist order requiring United States Rubber Co. and its subsidiary U. S. Tire Dealers' Corp., to discontinue alleged price discriminations and payment of special commissions in violation of the Robinson-Patman Act, has been issued by Federal Trade Commission.

The U. S. companies, responding to a complaint against their practices, only a little more than a week ago admitted virtually all charges (N.P.N., April 26, p.16), and consented to issuance of the order.

FTC cited as its findings in the case that U. S. Rubber and its subsidiaries "is one of the country's four largest tire manufacturers, with three principal distributing outlets: (1) automobile manufacturers, (2) certain wholesalers, mail order houses and retail store chains selling this company's tires under their own private brands or trademarks, and (3) thousands of wholesale and retail tire dealers and service stations throughout the United States.

Oil Company Deals Cited

The order prohibits, among other things, paying a 7.5 per cent over-riding commission to oil companies purchasing tires for resale to operators of service stations and jobbers selling the products of the oil companies "as compensation for services furnished by such oil companies in connection with the sale of the respondents' tires, unless such payment or commission is made available on proportionately equal terms to all other customers of the respondents competing with such oil companies in the distribution of respondents' tires."

Also ordered discontinued were "price discriminations, by or through the subsidiaries or other corporations controlled by the respondent, between a group consisting of Montgomery Ward & Co., Inc., Atlas Supply Co., Western Auto Supply Co., Western Auto Supply Agency of Los Angeles, and Arkansas Fuel Oil Co., on the one hand, and independent tire dealers, by selling special brand tires to Montgomery Ward and the four other companies named at net realized prices different and lower than the net realized prices at which U. S. Brand tires of like sizes, grade and quality are sold to the independent dealers."

The sale of tires through its own retail stores, which received a differential in price from other retail sellers, also was ordered discontinued, although the rubber company in its answer said such practice had been stopped some months ago.

The oil companies named as having received the 7.5 per cent over-riding commissions cited above were the Socony-Vacuum Oil Co., Inc., and its operating subsidiaries and affiliates; American Oil Co., Pan-American Petroleum Corp., and Tide Water Associated Oil Co. According to FTC, agreements for the payment of such commissions were found to "apply to sales made by respondents to more than 2800 service stations."

80% of Points 'Subnormal' Indiana Standard Reports

N. P. N. News Bureau

CHICAGO, May 1.—The gasoline price situation is worse this year than last, with about 80 per cent of the company's points of distribution having "subnormal" dealer tank wagon prices, as against 30 per cent below "normal" last year, Edward G. Seubert, president of Standard Oil Co. (Indiana) said at a press conference here last week prior to the annual stockholders meeting.

The company's volume in the first quarter increased but the gasoline price is "as bad as we've ever seen," he said. The parent company's profits "will be in the black," although lower than the 1938 first quarter, he added.

Gasoline sales of the company for the first quarter were about two per cent ahead of a year ago, he said. Volume on other products was up about 12 per cent, attributed, in part, to increased industrial demand.

The only shift in personnel was Charles J. Barkdull, executive vice-president and treasurer, being relieved of the treasurer's duties to give his entire time to administrative activities as executive vice-president.

Barkdull's duties as treasurer were divided between Ralph E. Clarke, elected treasurer, and C. T. Bergeson, elected to the new office of comptroller. Clarke joined the company as a stenographer 32 years ago, and Jan. 1, 1924, was elected assistant secretary-treasurer. Bergeson joined the company in 1916 and since Nov. 1, 1934, has been general auditor. All other directors and officials were re-elected.

Indiana Has Illinois Acreage

Indiana Standard has some acreage in Illinois but no production and has no definite plans for developing this acreage, he said. The company is buying some Illinois crude for its Wood River refinery, he added.

The company now produces about 36 per cent of its own crude oil requirements, and the goal is 50 per cent, Seubert said.

The company, he said, has studied the Houdry catalytic process but has decided to go along with the I. G. German group, M. W. Kellogg Co., and the New Jersey Standard with its own hydrogenation and catalytic process.

High salaries paid corporate officers were defended by Seubert. Such salaries, he pointed out, were an incentive for men in the ranks to seek higher positions, and were a reward for a man giving his life to an organization. Income tax payments on large salaries are high, he continued, so an executive is working for the government as well as for his company. The 18 directors and officers of the Indiana Standard, he said, receive $620,000 a year, which is equivalent to 4 cents per share of stock.

Gasoline Grading Bill Killed in Wisconsin

MADISON, May 1.—The proposed new oil inspection bill in Wisconsin, that would have given the inspection department power to establish gasoline specifications, was killed last week when the state and local government committee of the Senate voted indefinite postponement. The gasoline grading provisions were similar to the North Carolina law.

Other provisions were for the department to establish one or more laboratories within the state, and to prohibit underground storage of less than 500 gallons.

The measure was opposed by the retailers, the Wisconsin Petroleum Assn., and the Wisconsin Petroleum Industries Committee.

N.P.A. To Meet Sept. 13-15

WASHINGTON — National Petroleum Ass'n. will hold its 37th annual meeting on Sept. 13, 14 and 15 at Hotel Traymore, Atlantic City.

Texas Sets 60-Day Quota, Including 6 Shutdown Days

By Allen S. James
N. P. N. News Bureau

TULSA, May 1.—The Texas Railroad Commission apparently has had its fling at experimentation and has returned to the time-tested formula of considering recommendations of its engineers and testimony of oil men in preparation of allowable production orders.

This was indicated April 26 when the three commissioners signed a new order which covers May and June, calls for shutdowns six days in each month, and keeps daily average production within anticipated market demand.

The shutdowns will include the four Sundays as well as the first two Saturdays in each month.

The net daily average allowable during May is estimated at 1,393,077 barrels, which would represent a reduction from the net allowable in April of approximately 60,000 barrels daily. The net allowable in May also would be approximately 13,000 barrels daily under the 1,406,100 barres daily the Bureau of Mines had estimated would be the market demand for Texas crude in May.

"Including the 'creep-up' of an estimated 25,000 barrels daily due to new well completions and retests, the net daily allowable the first part of June would be 1,402,868 barrels, but would reach 1,422,868 barrels daily by the termination of the order on June 30.

The estimated net daily average production for the two months, however, would be approximately 1,412,868 barrels.

Many oil operators see in the new order a definite indication Chairman Lon A. Smith and Commissioner Jerry Sadler, both East Texans, have been convinced by the fireworks that followed their attempts to write their own ideas into an April order that they were on the wrong track.

The new order carries a memorandum from C. M. Langford, the commission's production chief, and a comparison of the order with that memorandum shows that the commissioners followed his recommendations almost to the letter. That fact brings to the minds of many oil men the further conclusion that the commissioners instructed Langford to draft the memorandum on the basis of the testimony presented at the statewide hearing at Austin on April 17. (N.P.N., April 19, Page 9.)

It will be recalled that at the hearing it was recommended by several witnesses that a 60- or 90-day order be prepared, and that the allowables be kept within the estimated market demand.

Several fields were exempted from the shutdowns during May and June, but the order requires those fields to curtail daily allowables so that total production for the period will be the same as if the shutdowns actually had been applied to them.

The East Texas field was retained on the factor of 2.32 per cent of the hourly per well potential. Some shifts in allowables were necessary, however, in order to cut the daily average total for the state down to the figure recommended by the commission's engineering staff.

Allowables for the Gulf Coast, West Texas, North Texas and Panhandle districts were increased somewhat, while those for the Southwest Texas and West Central Texas, East Central Texas and West Central Texas fields were reduced.

Engineer's Memo Cited

Engineer Langford's memorandum had stated in part that:

"We are confronted with the problem of limiting our production to the indicated market demand. If we are to keep our production in Texas within the demand obviously reductions must be made in many fields.

"There are numerous fields that cannot be further reduced since they are already at or below marginal. There are also fields where the presence of water or other conditions demand the operation of seven days a week in order to prevent physical waste, as well as fields where local refinery demand and special market outlets must be considered on the basis of testimony which has been presented to the commission at various hearings.

"We have gone over the facts of each and every individual field and have endeavored to arrive at a fair and equitable allocation of the allowable for the various fields . . . without causing physical waste and still keep the production for May and June within the market demand as estimated by the Bureau of Mines."

Sadler Cites Crude Stocks Drop

After signing the new order Commissioner Sadler took occasion to issue a statement in which he indicated his doubt of the wisdom of restricting Texas production any further. He pointed to national production figures as well as those of various states and compared them with production in Texas.

"There are some conditions affecting oil production and markets in Texas," the statement read in part, "that operators and the public should be aware of, but who apparently are not, especially in view of the fact that recent public statements have been issued to the effect that there is great overproduction in the United States and that as a consequence Texas must keep down her allowable.

"Here is the first striking comparison. Crude stocks in the United States on April 8 totaled 275,774,000 barrels and a year ago 307,556,000 barrels . . . On April 15 the daily production in the United States averaged 3,492,057 barrels and in Texas 1,435,000 barrels. Texas was producing about 30 per cent of the total but it was not long ago that Texas was producing 40 per cent of the national total, so Texas evidently has lost 10 per cent of production to other states. . ."

Injunction Plea Dismissed

The last hang-over that followed the April allowable-writing efforts of the commission's new coalition was dissipated, meanwhile, by the three judge federal court at Houston on April 28, when it dismissed as moot the application of two operators for an injunction against two of the three orders written for April.

The two operators, Harrison Oil Co. and J. S. Abercrombie, had obtained a temporary injunction restraining the commission from enforcing the March 30 and April 1 orders as they applied to properties operated by the two companies. Despite the fact that the April 3 order restored the properties of the companies to allowable previously in force, the case was kept in court for hearing before the three-judge court.

Dismissal came after the court was told the commission had no intention of renewing the orders which had been attacked. The action of the court, lawyers said, was a victory for the commission in that it won its fight against injunction, and a victory for the companies because they were given signed assurances that there would be no reductions of the allowables of their wells, except after proper hearings, and that the companies would not be subject to any penalties by reason of any violation of the proration orders which had been attacked.

* * *

Oklahoma May Allowable is Unchanged; Louisiana and Arkansas Quotas Hiked

OKLAHOMA CITY, May 1.—Allowable production in Oklahoma during May will be 428,000 barrels daily, the same total that has been in effect since last August.

Some shift in field allowables was made, however, in the order which Conservation Officer W. J. Armstrong recommended to the Corporation Commission. Eight prorated fields were given increases, while reductions were made in four fields which had been unable to make their quotas for the past few months.

The Bureau of Mines had estimated market demand for Oklahoma crude in May at 455,800 barrels daily, a drop of 17,500 barrels from the Bureau's estimate for April. Drop was believed to have been due to the fact some of Oklahoma's crude has been going to storage in recent months.

Armstrong reported that the state had overproduced 33,000 barrels daily in April, with daily average at 461,003 barrels, but this figure, he pointed out, still was under the Bureau of Mines' estimate.

The increases in daily allowables were granted the Oklahoma City Wilcox zone; Billings-Wilcox; Fish pools, Lucien, Seminole City, St. Louis, West Doyle, and Avoca.

The Moore field, Fitts, Jesse-Hunton and Dora pools were reduced.

* * *

EL DORADO, Ark., May 1.—Daily allowable production in the south Arkansas fields has been set by the Arkansas Conservation Commission at 54,627 barrels daily in May. This is an increase of 1634 barrels daily over April allowable. The Bureau of Mines had estimated market demand for Arkansas crude in May would be 52,900 barrels, daily, or 1727 barrels daily under the allowable set by the state regulatory body for the month.

* * *

BATON ROUGE, La., May 1.—Louisiana's department of conservation has set daily allowable production in that state during May at 263,634 barrels, an increase of 5714 barrels daily above the April figure, and 2034 barrels daily above the Bureau of Mines' estimate of market demand for Louisiana crude in May.

South Louisiana fields were given a daily allowable of 201,005 barrels, while those in North Louisiana were given one of 62,629 barrels daily.

California Oil Bill Favorably Reported

N. P. N. News Bureau

LOS ANGELES, April 29.—Plans for statutory control of California crude oil production, along lines of an anti-waste measure, went one step nearer final solution—which may be at the hands of the electorate under a referendum action—when the Assembly oil industries committee gave a "do-pass" approval to A.B. 1926, April 25.

Retaining most of the 43 proposed amendments, most important of which were provisions to increase the commission from three to five members and to ease the curtailment burden on small-well operators, the approved bill is without the suggestion that the commissioners be oil men of 10 years experience. In fact, it specifically prohibits any commissioner from having any interest in the oil industry.

Between now and crucial test of the measure in the Assembly—not expected for another week, it is indicated many large and important independent producing companies will throw their weight in favor of state control. This would be an important development since, to date, public comment in support of the measure from within the industry has been conspicuous by its absence.

Favorable action on the bill by the Assembly has been lessened within the past week or ten days, it is believed, by developments in the lower house which saw a cooling attitude toward the C.I.O. and its sponsored legislation. This may have a direct bearing on the oil bill, which has been openly and vigorously supported by representatives of the Oil Workers (C.I.O.) Union.

In commenting on the law as amended and comparing it with modified suggestions on the part of responsible men in the oil industry, some for the bill and some against, the Oil Producers Agency makes the following analysis:

It was suggested that the prohibition against oil men serving on the commission be removed. This was not done.

A proposal that injunctions against the commission's orders be allowed, was not approved.

In place of a suggested two-year limit for life of the law, approval was given to a four-year period.

The suggestion that commissioners be appointed by districts was adopted.

Not adopted was the proposal that no single commissioner be granted power to issue subpoenas, and that such action be taken only by vote of the entire commission.

No mention is made in the present draft that the Central Committee and its records be preserved, and that the committee act as an advisory body.

The suggestion that a minimum curtailment figure be established for small wells was met by limiting proration orders to wells producing 25 or more barrels per day.

Voluntary Control Revised

While these plans are going ahead for a final showdown on whether California is to join other oil producing states having oil control laws, the newly elected central committee of oil producers is perfecting an improved voluntary curtailment set-up.

Meeting in regular session April 26, the committee received a recommendation that the state crude quota remain unchanged for May at 575,000 barrels, plus a 1000 barrel allowable for new wells completed during the month.

However, following much argument which became heated at times, it was decided to postpone determination of the May allowable until all operators in the state had been acquainted with a new plan for uniform allocation of production in California fields. The committee will reconvene May 4 to take definite action on the proposal.

Following suggestions advanced by the Fact Finding Committee, following a three-month study of the voluntary curtailment program in this state, the proposed uniform proration method is designed to give wells of equal size and depth the same allocation regardless of location and type of oil produced.

Fault was found with the formula by the representative for one large major company who said the result would be to increase the output of heavy oil and restrict flow of light refinable crude, "not in harmony with the situation today and not in harmony with equitable curtailment."

In its application, the formula would establish maximum output from any well at 250 barrels daily, while wells of average depth—estimated at 3000 feet in this state—would be allowed a minimum production of 15 barrels a day without further curtailment. Only depth and potential production would be used in determining individual well allotments.

For the state as a whole the formula would yield a daily average output from all wells of 587,000 barrels which, with additions for new well completions not taken care of by decline in producing wells, would probably be increased to around 590,000 barrels a day.

California Wildcat Promises New Field

N. P. N. News Bureau

LOS ANGELES, April 29.—Outstanding development on California's production horizon the past week was the apparent extension four and a half miles to the north of the prolific Coalinga Nose field in the upper San Joaquin Valley, where wells bottomed around 8000 feet in Eocene formation have shown potential capacities in excess of 20,000 barrels daily. Petroleum Securities Co. discovered deep Coalinga production in 1938.

Amerada Petroleum Co., on a short flow test of its Southern Pacific 7-17—a wildcat project four and a half miles away from nearest production — developed an output rated at 4230 barrels daily of 28.3 gravity oil and 14,500,000 cubic feet of wet gas through a 44/64-inch bean. Total depth of the hole is 8237 feet, with production coming through 139 feet of perforation.

In the minds of some observers there is the belief that Amerada has opened up an entirely new field in the Eocene shoreline east of the old Coalinga field and that production is coming from an accumulation formed by Kreyenhagen shales overlying Eocene sands.

Illinois Oil Field Rioters To Be Tried May 15

N. P. N. News Bureau

CHICAGO, May 1.—The trial of three men arrested in connection with the riot recently when about 250 men invaded the new Cordes oil field near Nashville, Ill., and temporarily suspended all operations, has been set for May 15.

The men, all from in or near Nashville, are charged with inciting riot and were freed last week under bond. Warrants are out for three others on the same charges.

Illinois Oil Group Drafts Its Report On Oil Legislation

N. P. N. News Bureau

CHICAGO—The Illinois joint legislative committee took testimony April 28 at Matoon, Ill. from eleven witnesses at the final hearing of the investigation of the oil industry preparatory to the drafting of oil legislation.

The committee will analyze the testimony compiled at four public hearings held within the state and report to the legislature.

Sentiment for and against state proration of crude was reported about evenly divided among those who testified at the April 28 hearing.

George M. Pfau, of Texarkana, Tex. and A. B. Potter, president of Cumberland Petroleum Co., of Centralia, told the committee April 28 that tentative plans for the construction of refineries in southern Illinois would be abandoned if proration laws were enacted.

C. F. Bunker, McBride Oil Co., Centralia, testified that he favored proration and well-spacing regulations. Such regulation, he said, would prevent underground waste resulting from inefficient utilization of natural gas energy.

A state oil production tax, to supplant all present or contemplated taxes on oil property was suggested by J. R. Thompson, an independent leasing agent of Matoon.

Texas Oil Law Gets Extension

AUSTIN, Tex., May 1.—Texas will have a crude oil conservation law for another two years with the Texas Railroad Commission as the enforcement agency.

That was made virtually certain April 26 when the Texas senate, by vote of 23 to 6, passed a House bill which called for the extension of the state law for another two years, or until Sept. 1, 1941. Gov. Lee O'Daniel is expected to sign the bill as soon as it reaches his desk, since he has indicated his desire that such legislation be enacted.

Threats of legislation which would create a separate oil and gas commission, and uncertainty in some quarters that the conservation act would be extended died with passage of the bill by the senate.

Around THE MID-CONTINENT

. . . By ALLEN S. JAMES

Not so many years ago Earl P. Halliburton, ex-gob in Uncle Sam's navy, started down the road to wealth because oil men knew he could be depended on to get to a well, no matter how rough the going, and to do a dependable job of cementing. Today he is president of the Halliburton Oil Well Cementing Co., and has his finger in a multitude of other enterprises, including a gold mine in Honduras from which the gold has to be brought out by plane.

Last week Halliburton brought his recently-acquired luxury yacht to Galveston so he could entertain his oil men friends attending the Houston Oil-World Exposition. He had purchased the yacht only a few weeks previously in New York, renamed it the "Vida" in honor of his wife.

The yacht was built in 1929 for W. O. Briggs, Detroit automobile body manufacturer. It boasts a private barber shop, a bathroom with gold plumbing fixtures and an $80,000 stabilizer to keep guests from becoming seasick.

There is a telephone in each stateroom, and guests can talk to one another in any part of the vessel through the central switchboard. There is a gymnasium, exercise room and rubbing table.

Purchase was made through the Honduran gold mining company, and the vessel is of Honduran registry.

Halliburton is planning the installation of air-conditioning aboard the yacht.

* * *

• Jack Levering Goes Boating

Speaking of boats, Jack Levering, who is the "eyes" for the Stanolind Crude Oil Co. on the Gulf coast with headquarters at Houston, is having a small sailing boat built at Beaumont, Tex.

Oil men who were in on all the activity in and around Tulsa back in the days when the lobby of the Hotel Tulsa was the gathering place for negotiating deals, probably will remember Jack as the youngster sometimes at the Men's Store of his father, Lee Levering, in the hotel building.

Jack Levering spent some of his summer vacations as a roustabout in the oil fields, then became a scout with assignments in most of the Mid-Continent's large fields. He was right in the center of activities in the East Texas field.

Everything he owns, Jack says, he has been able to put in a trunk but now, after being close to the Gulf for a time, he has gotten the fever to be a small sail boat owner.

* * *

• No 'Open Sesame' Needed To Get to Humble's Brown

The first time a visitor calls on B. H. Brown of the Humble Oil & Refining Co. at Houston, Tex., he is in for a mild surprise.

After telling the hall attendant whom he desires to see, the visitor will not be announced by the attendant, but will be told instead to "just go on through that door, and then through the first door to the right."

Following directions the visitor suddenly finds himself in Brown's private office. There may be two or three other visitors already in there but that makes no difference. Brown invites the latest arrival to have a seat, that he will be through in a minute.

If the visitor opens the door to the private office, sees Brown already has company and starts to back out, Brown rushes his secretary out to tell the caller to just have a seat there by the door for a minute or two.

The first time the writer called on Brown, there was, among other visitors waiting to talk to "Mr. Benny," a grey-haired negro who wanted a little advice about a matter "out on the farm."

"Don't you even announce anyone?" the writer once asked the hall attendant later.

"No," she said. "Mr. Brown does not even like to have cards sent in. He wants, and tries, to see everybody who wants to see him."

Alkylation Refining Process To be Offered for License

ALHAMBRA, Calif., April 28. —Development of a catalytic alkylation process has been completed and it will be licensed to the oil refining industry, the C. F. Braun Co. announced today. The process is covered by patents held by Anglo-Iranian Oil Co. of England, Shell Development Co., Standard Oil Co. of New Jersey, and Texaco Development Corp., and will be licensed under those patents.

Shell and Texaco entered a cross-licensing agreement some time ago covering their discoveries. Later Standard of New Jersey and Anglo-Iranian completed a similar agreement. More recently the two groups entered a third licensing agreement under which individually owned patents of each company are open to others in the group. Each company has the right to grant licenses to the industry on a royalty basis.

Full technical details are available to the licensee and the licensee may build his own plant or choose a capable construction company for that purpose.

The alkylation process operates on light hydrocarbons such as propane, propene, butanes and butenes, by which the unsaturated or olefin hydrocarbons are alkylated with iso-paraffins, using concentrated sulfuric acid as catalyst. It is a successful method by which saturated hydrocarbons very high in anti-knock properties are produced in one step instead of by the two steps formerly employed to produce essentially the same type of product. These two steps are polymerization of olefins and the hydrogenation of the resulting olefins to saturated products. Both these steps are catalyzed reactions.

Because high pressures or high temperatures are not employed, the new process promises low operating costs as well as low installation costs, the announcement states. Yields of fuels of 90-100 octane number are reported to be high.

Dr. A. E. Dunstan, who directed the development work on this process for Anglo-Iranian reported some months ago that the total yield of product in one case was 152% based on the olefin processed, or presumably about 76% of the total gases involved in the reaction. Dunstan stated (NATIONAL PETROLEUM NEWS, Refining Technology Ed., Sept. 7, 1938, page R-454) that processing the butane-butene fraction from cracked refinery gases yields a product which when blended with 25% of 70 octane number Iranian gasoline and 2.17 cc. of tetraethyl lead gives a satisfactory 100 octane number aviation fuel.

In the Anglo-Iranian process reported the acid employed ranges from 96% to 101% concentration, the higher percentage being used for propene-isobutane processing, with optimum temperature of 68° F.

The Braun company has built many of the large liquid-phase acid-hydrocarbon reaction units in this country, report says, and is in position to advise refiners on the economics of any particular application of the process, to make estimates of costs and to design and construct plants operating on this process.

Several plants now are building or operating in the United States.

Patent Infringement Suit Won by U.O.P.

N. P. N. News Bureau

CHICAGO, May 1. — A suit charging infringement of two patents brought by Universal Oil Products Co. against the Globe Oil & Refining Co. of Illinois, was won by Universal in a decision handed down last week in federal Court here by Judge William H. Holly.

The two patents in suit are the same two which were adjudged valid and infringed in the now famous suit, Universal vs. Root Refining Company, which Universal won in federal district Court at Wilmington, Del., in 1934. Appeal was taken by Root to the federal circuit court of appeals at Philadelphia, which sustained the lower court. A writ of certiorari was later denied by the U. S. Supreme Court.

The court found that Globe as a member of the voluntary association known as the Patent Co. participated in the defense of the suit brought by Universal against Winkler-Koch Engineering Co. and the Root Refining Co. and was bound by the decree in that case.

Judge Holly's conclusions of law also held that the decree in the Root case is a final decree as to the infringement and validity of patents in that action.

The patents involved in the Globe and Root case were No. 1,392,629 issued to Carbon P. Dubbs, known as the clean circulation patent, and No. 1,537,593 issued to Gustav Egloff, known as the two-coil selective cracking patent.

Globe lost the first phase of the suit last July when Judge Holly denied a motion that the suit be dismissed because Universal was allegedly in court with "unclean hands." It was charged that Universal had used unethical methods in obtaining information and investigating processes years ago in Texas.

Federal Court Sets Hearing On Tulsa Strike Complaint

By Teletype
N. P. N. News Bureau

TULSA, May 2.—Hearing on complaint filed against Mid-Continent Petroleum Corp. by National Labor Relations Board charging "unfair labor practices," has been set for May 15 in Federal Court here. Complaint was issued April 29, Dr. Edwin A. Elliott, regional director of NLRB announced at his Fort Worth office.

The complaint indicates that the CIO-oil workers' union strength at the strike-affected plant in west Tulsa is 625 members.

Another conference, probably May 3 is being planned by Governor Leon C. Phillips. He expects to come to Tulsa for the conference with both the union heads and the corporation's officials.

A demurrer attacking validity of the grand jury indictment against 106 alleged strikers for unlawful assembly was overruled May 1 and trials set for May 8 in Common Pleas Court.

Jack Hays, president of the Oil Workers Local, is scheduled to go on trial in District Court May 15 on a conspiracy indictment.

* * *

Mid-Continent Report Quotes Union's Letter

N. P. N. News Bureau

TULSA, May 1.—Mid-Continent Petroleum Corp.'s annual report, recently released, quotes a letter signed by Jack N. Hays, "general chairman of Mid-Continent union employes", which was said to have been served on corporation officials at time of the strike last December, as proof that a "sitdown" occurred.

Since the strike was called the U. S. Supreme Court has held that sitdown strikes were illegal and officials of the Oil Workers (C.I.O.) Union have contended recently that the strike at Mid-Continent's plant was not a "sitdown."

Following is the comment from Mid-Continent's report and the Hays letter as quoted in the report:

"On December 22, 1938, without notice or warning, about 150 of the employees at the refinery took possession of the turbo-electric plant and with force and violence proceeded to shut down the operations of the refinery. On their way to the turbo-electric plant, the following letter declaring their intentions was left at the office of the Refinery Superintendent.

'We have done everything in our power to settle our differences in a peaceful manner but every effort to do so has been resisted by the Company, so there is nothing else left except to shut this place down, which we are now doing. We will shut it down in a safe and systematic manner if we are not interfered with. I am asking you to co-operate. We hope you will, but we are shutting it down regardless.

'Your gun-toting guards, we are told, have no commissions and are criminally liable for any act of violence they may commit and the Company is financially liable for their acts. *Use your head.*

'The property will be protected to the best of our ability. Any destruction of it will be the fault of the Company.

'We hope this fight may be terminated as speedily as possible. The Committee representing the union Employees are ready to enter negotiations at any time the management shows a desire to do so and those having the proper authority are assigned to the task.

'We hold no animosity in our hearts toward anyone. When this fight is over we hope that both sides will have conducted themselves in such a way that bygones will be by-gones and friendships may start in where they left off.

'The officers of this organization will keep themselves available at all times and can be reached at any time through our headquarters.

'Those of the Company who are in positions of responsibility such as Departments Heads, Firemen and Guards will need have no fear of molestation if they will properly identify themselves and conduct themselves as gentlemen.

Signed: JACK N. HAYS
General Chairman
Mid-Continent Union Employees'

"After about six hours, officials of the Company succeeded in getting the men out of the refinery but they then blocked the entrances and for two days kept out employees who were off-duty when the strike began and also trucks and railroad cars carrying food and supplies to the four or five hundred loyal men who had remained at work. In order to get key men and food supplies into the refinery, it was necessary to hire airplanes to fly them in which was most hazardous due to the limited space available for landing. After numerous acts of violence, the local law enforcement authorities were unable to restore order and requested the Governor to call out the militia. A detachment of troops arrived on the evening of the 24th, and the refinery area has since been under military control. After the first few days, operations at the refinery were resumed and have since continued without interruption.

"Immediately following the strike at the refinery, groups of strikers took possession of Company oil leases and shut down and occupied pipe line pump stations and natural gasoline plants, forcing the Company to obtain injunctions in several counties before the strikers relinquished their illegal possession."

Crude Price Changes

SHREVEPORT. — Effective April 29 Caddo Crude Oil Purchasing Corp. posted reduced prices for Lisbon, North Louisiana crude which, the company said, were based on the crude's refining value. Reduction was 10 cents. New Prices are: $0.73 for below 34 gravity oil, $0.75 for 34-34.9 gravity, and $0.77 for 35 gravity and above.

The announcement said that Rodessa Oil & Refining Co., Caddo's only customer for Lisbon oil, wanted to discontinue refining this crude.

Spread is Widened By Socony-Vacuum In New York City

N. P. N. News Bureau

NEW YORK, April 27.—On April 27 Socony-Vacuum Oil Co. advanced its tank wagon price for regular gasoline to undivided dealers from 7.4 cents to 7.8 cents, while advancing its minimum resale price 0.8 cent from 10.5 to 11.3 cents in the New York city boroughs of Kings, Queens, Manhattan and Bronx and through lower West Chester and Nassau counties.

This will result, if Socony's dealers elect to sell at the minimum resale price, in an advance of 0.4 cent in the gross margin from 3.1 to 3.5 cents in the New York boroughs and counties affected.

At the same time, the company advanced its tank car gasoline price in the four New York City boroughs 0.1-cent from 6.5 to 6.6 cents.

In the Borough of Richmond the tank car price was advanced from 6.5 to 6.6 cents, and tank wagon prices to dealers were advanced from 7.9 cents to 8 cents per gallon. The company does not post a minimum resale price in Richmond borough.

Above prices do not include taxes.

'Gas' Stocks Drop Sharply

N. P. N. News Bureau

NEW YORK, May 2. — A decline of 975,000 barrels in gasoline stocks despite a sharp jump in refinery crude runs and increased gasoline production featured the American Petroleum Institute's report today of refinery operations in the week ended April 29.

Daily average crude runs for the entire country were estimated by the Institute as 3,405,000 barrels, up 125,000 barrels from the week ended April 22, and the highest since the first week of October, 1937 when runs averaged 3,450,000 barrels daily. Texas-Gulf refiners boosted their runs 64,000 barrels daily and other large increases were California 35,000 barrels and Indiana-Illinois-Kentucky, 32,000 barrels.

Gasoline production at plants reporting this item to the Institute increased 99,000 barrels with output for the week totaling 9,884,000 barrels.

The decline of 975,000 barrels in gasoline inventories last week followed two weeks of increasing inventories and compared with a decline of only 528,000 barrels in the April 22-29 period of 1938. Estimated total stocks on April 29 stood at 86,794,000 barrels, 3,340,000 barrels under stocks on the same date a year ago.

Crude Stocks Up

N. P. N. News Bureau

WASHINGTON, May 1. — Stocks of crude petroleum amounted to 277,156,000 barrels on April 22, Bureau of Mines reports, an increase of 1,299,000 barrels compared with previous week's total. A year ago stocks were 307,654,000 barrels.

Detailed figures will be found in the accompanying box.

Weekly Changes in U. S. Crude Oil Stocks*

(Thousands of Barrels)

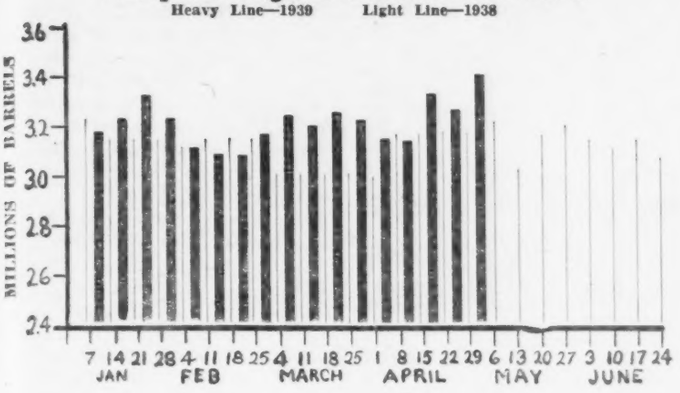
Grade or Origin	April 8	Apr. 15	Apr. 22	Chng. from April 15
Pennsylvania grade	5,556	5,587	5,656	+ 69
Other Appalachian	1,358	1,337	1,332	— 5
Lima-Michigan	1,832	1,807	1,842	+ 35
Illinois-SW Indiana	12,153	12,138	12,295	+157
Arkansas	3,167	3,110	3,104	— 6
Kansas	7,230	7,061	7,106	+ 45
Louisiana	13,980	13,802	14,175	+373
Northern	5,752	5,747	5,802	+ 55
Gulf Coast	8,208	8,055	8,373	+318
New Mexico	6,587	6,202	6,664	+462
Oklahoma	69,348	69,807	69,919	+112
Texas	91,534	91,635	91,393	—262
East Texas	20,888	21,167	20,993	—174
West Texas	16,964	16,897	16,163	—734
Gulf Coast	21,391	21,434	21,811	+377
Other Texas	32,291	32,157	32,426	+269
Rocky Mountain	20,611	20,569	20,596	+ 27
California	39,477	39,746	39,814	+ 68
Foreign	2,961	3,036	3,260	+224
Total U. S. Refinable	275,774	275,857	277,156	+1,299
Heavy in California	15,687	15,658	15,507	—151

*As compiled by U. S. Bureau of Mines.

Latest Oil Industry Statistics

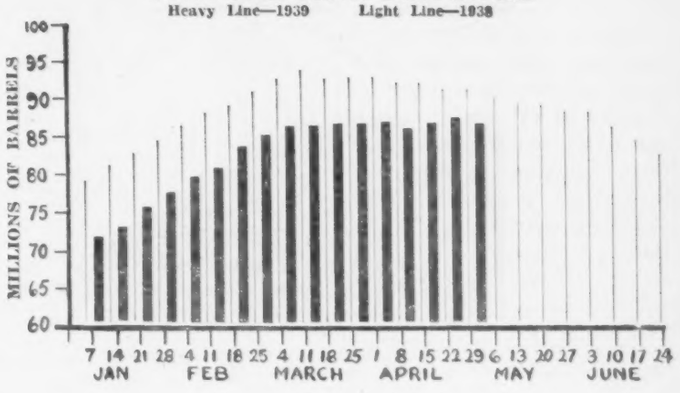
Daily Average Crude Runs to Stills

Heavy Line—1939 Light Line—1938



Total U. S. Motor Fuel Stocks

Heavy Line—1939 Light Line—1938



A. P. I. Weekly Refinery Report

(Figures in Thousands of Barrels of 42 Gallons Each)

Districts	Per Cent Capacity	Daily Average Crude to Stills (Barrels) Week Ended		Per Cent of Reporting Capacity Operated Week Ended		(a) Gasoline Production Week Ended		Stocks (Thousands of Barrels) Total Finished and Unfinished Motor Fuel (b) Week Ended		Stocks of Gas and Fuel Oil — Gas Oil and Distillates Week Ended		Residual Fuel Oil Week Ended		Total Week Ended	
		April 29	April 22	April 29	April 22	April 29	April 22	April 29	April 22	April 29	April 22	April 29	April 22	April 29	April 22
East Coast	100.0	521	516	84.7	83.9	1,480	1,447	21,934	22,207	1,963	2,232	2,912	3,227	4,875	5,459
Appalachian	85.9	105	108	82.0	84.4	381	414	3,589	3,565	215	241	474	491	719	732
Ind., Ill., Ky.	89.5	488	456	94.9	88.7	1,901	1,792	15,019	15,115	2,125	1,949	2,693	2,620	4,818	4,569
Okla., Kans., Mo.	81.6	265	277	77.5	81.0	(c)926	(c)982	7,866	7,697	1,045	1,028	2,821	2,831	3,866	3,859
Inland Texas	50.3	112	122	70.4	76.7	534	560	1,658	1,636	272	264	1,444	1,462	1,716	1,726
Texas Gulf	89.5	838	774	93.6	86.5	2,637	2,654	11,009	11,099	3,132	3,097	4,531	4,526	7,663	7,623
La. Gulf	97.3	143	132	98.6	91.0	334	345	2,565	2,928	742	833	997	893	1,739	1,726
No. La., Ark.	55.0	40	41	72.7	74.5	131	108	470	475	239	231	510	510	749	741
Rocky Mt.	54.2	40	36	62.5	56.3	220	173	1,782	1,771	105	111	607	613	712	724
California	90.0	512	477	68.7	64.0	1,340	1,310	15,672	15,936	10,644	10,515	83,338	83,383	97,032	96,900
Total Reporting	85.8	3,064	2,939	83.7	80.3	9,884	9,785	81,594	82,539	20,512	21,498	103,350	103,543	123,882	124,043
U. S. Total (d)		3,405	3,280					86,794	87,769	21,072	21,058	105,643	105,835	123,712	125,893
U. S. Total, 4-29-38(d)		3,189						90,134		19,936		107,623		127,555	

(a) Includes straight-run, cracked and natural blended.
(b) Includes stocks at refineries, in bulk-terminals, pipe lines and in transit.
(c) 12% of reporting capacity in this district did not report gasoline production.
(d) Estimated, U. S. Bureau of Mines basis.

Trends of Basic Figures

	April 29	April 22	April 29, 1938
Crude Production (Bbls. daily)	3,568,200	3,526,700	3,396,150
Crude Imports (Bbls. daily)	134,710	70,710	44,710
Crude Runs to Stills (Bbls. daily)	3,405,000	3,280,000	3,189,000
Gasoline Stocks (Bbls. total)	86,794,000	87,769,000	90,134,000
Gas and Fuel Oil Stocks (Bbls. total)	126,712,000	126,893,000	127,556,000

Crude Oil Production for the U. S.

(American Petroleum Institute figures)

	Week Ended April 29 Barrels	Week Ended April 22 Barrels	Week Ended April 15 Barrels
Oklahoma City	104,150	104,450	101,700
Total Oklahoma	462,100	451,600	436,500
Kansas	177,750	171,000	169,950
East Texas	446,800	446,650	447,000
Total Texas	1,461,800	1,454,150	1,435,150
Total Louisiana	266,700	268,800	264,850
Illinois	185,650	174,500	165,000
California	604,600	610,700	628,200
East of Rockies	2,963,600	2,916,000	2,866,300
Total U. S.	3,568,200	3,526,700	3,494,500
Crude Imports	134,710	70,710	57,570
Total New Supply	3,702,910	3,597,410	3,552,070

Inventories, March 31, 1939, of Pennsylvania Lube Oils

(Compiled by National Petroleum Ass'n from reports of all companies which refine Pennsylvania crude oil. Figures in barrels.)

Raw Long Residuum (Including all raw long residuum below, and not salable, as 600 fire)	16,427
Steam Refined (Includes all steam refined stock commonly sold or used as 600 and as raw material for bright stocks)	205,521
Other Steam Refined (Not included in above items)	118,401
Finished Dewaxed Long Residuum	50,756
Bright Stock (Does not include any material reported in Finished Dewaxed Long Res.)	403,922
Viscous Neutral, below 180 vis. but not below 142 vis at 100	120,266
Viscous Neutral, 180 vis. at 100 and above	190,677

Inventories, March 31, 1939, of Pennsylvania Oils Other Than Lubricating Oils

(Compiled by National Petroleum Ass'n from reports of oil region refiners. Figures in barrels.)

Naphthas and Gasolines	
(1) Straight run, unblended and/or unleaded, for sale as motor fuel	44,129
(2) Naphtha and gasoline, for sale for blending or further refining, or held at refinery for further distillation, reforming, blending or leading	394,290
(3) Below 65 octane, not included in (1) or (2) above	14,208
(4) 65 Octane and above	392,657
Salable naphthas other than motor fuel material (do not include refinery process naphthas)	30,249
Kerosine	81,026
36-40 gas oil (include furnace oil)	50,569
Fuel oil (not reported above)	24,034
Oils held as cracking plant charging stocks	286,399
Non viscous neutral	12,165
Wax distillate	98,311
Crude petroleum	10,934
Wax (lbs.)	4,845,614

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Coming Meetings

American Gas Assn., Natural Gas Section, Tulsa, Okla., May 8 to 11.

National Fire Protection Assn., Chicago, May 8 to 12.

Virginia Oil Men's Assn., annual spring meeting, John Marshall Hotel, Richmond, May 11, 12.

National Battery Manufacturers Assn., Greenbrier Inn, White Sulphur Springs, W. Va., May 11, 12.

Bradford District, Pennsylvania Oil Producers Assn., annual meeting, Bradford, Pa., May 12, 13.

American Petroleum Institute, 9th mid-year meeting, Roosevelt Hotel, New Orleans, La., May 15 to 18.

American Institute of Chemical Engineers, Mayflower Hotel, Akron, O., May 15, 16, 17.

National Oil Scouts Assn., Houston, Tex., May 18-20.

National Assn. of Purchasing Agents (Oil Company Buyers' Group), annual meeting, Fairmont Hotel, San Francisco, Calif., May 21 to 25.

World Automotive Engineering Congress, sponsored by S.A.E. for New York, Hotel Pennsylvania, May 22-28; Indianapolis, May 29, 30; Detroit, Hotel Statler, May 31-June 2; San Francisco, Hotel Fairmont, June 6-8.

Illinois-Indiana Petroleum Assn., annual meeting, Robinson, Ill., June 3.

Fire and Safety Marshals of National Petroleum Assn., 14th annual meeting, Hotel Schenley, Pittsburgh, June 6 and 7.

Oil Trades Assn. of New York, sports day, Pelham Country Club, Pelham, N. Y., June 13.

Pennsylvania Grade Crude Oil Assn., annual meeting, Hotel Hershey, Hershey, Pa., June 15, 16.

13th International Congress of Carbide, Acetylene, Oxy-Acetylene Welding & Allied Industries, Munich, Germany, June 25 to July 1.

American Society for Testing Materials, 42nd annual meeting, Chalfonte-Haddon Hall, Atlantic City, N. J., June 26 to 30.

American Institute of Mining & Metallurgical Engineers, regional meeting, San Francisco, July 10 to 17.

The Eastern United States Michigan Oil & Gas Exposition, Mt. Pleasant, Mich., Aug. 1 to 6.

American Society of Mechanical Engineers, Hotel Pennsylvania, and Engineering Societies Bldg., 29 West 39th St., New York, Sept. 4 to 8.

Oil Workers International Union, Hammond, Ind., Sept. 5.

American Chemical Society, Detroit, Sept. 9 to 13.

National Petroleum Assn., 37th annual meeting, Hotel Traymore, Atlantic City, N. J., Sept. 13, 14, 15.

Oil Trades Assn. of New York, sports day, Pelham Country Club, Pelham, N. Y., Sept. 19.

New Jersey Oil Trades Assn., fall outing, Sept. 28.

National Lubricating Grease Institute, Stevens Hotel, Chicago, Oct. 2, 3.

Independent Petroleum Assn. of America, 10th annual meeting, Ft. Worth, Tex., Oct. 18-20.

National Tax Conference, Palace Hotel, San Francisco, week of Oct. 16.

40th Annual National Automobile Show, Grand Central Palace, New York, week of Oct. 15.

National Safety Congress and Exposition, Chalfonte-Haddon Hall, Atlantic City, N. J., Oct. 16 to 20.

American Gas Assn., annual convention, New York, Oct. 9, 10.

National Motor Truck Show, Navy Pier, Chicago, Nov. 8-16.

American Petroleum Institute, 20th annual meeting, Stevens Hotel, Chicago, Nov. 13-17.

Oil Trades Assn. of New York, annual banquet, Waldorf-Astoria Hotel, New York, Nov. 14.

Refining Technology . . . MAY 3, 1939

(Including International Petroleum Technology)

Dear Reader:

Did you see "Dick" Wotowitch of Cities Service at the American Petroleum Institute meeting at Chicago last November?

If you did, you must have noticed that he was stirring about more than usual. If possible he was even more places at once than when he attends a meeting of his beloved Fire and Safety Marshals Association in western Pennsylvania. And of course the ever-present flower on his lapel was unwilted as always.

This time "Dick" was organizing the "Twenty-Five Year Club" of old timers in oil. Any oil man can belong. The only requirement is that you must have been on the job at least a quarter of a century.

★ ★ ★

In this issue the Refining Technology Edition of N.P.N. salutes one of the 104 charter members of Dick's club. On our front cover we are proud to publish the photograph of Dr. "Tom" Delbridge, director of research and development of Atlantic Refining Company.

Dr. "Tom" or maybe you call him "Del" has five years to spare over the minimum required for membership in the Twenty-Five Year Club. It was in 1909 that he joined the Atlantic staff. His 30 years do not seem so long when you think that you can still find J. W. Van Dyke, the man who hired Dr. Delbridge, at his Broad street office after 70 years with Atlantic.

Out on Passyunk Ave. at the Point Breeze plant Dr. Delbridge has a bigger staff of researchers than ever finding out more about these complex hydrocarbon molecules that we dig for, tear up and rebuild and finally sell at too low a price.

This year he is finding time somehow to be the spark-plug of both his Atlantic researchers and of the American Society for Testing Materials of which he is president. Just lately he has completed a tour of local A.S.T.M. sections to talk to the individual groups about the work they are doing on many problems in many industries.

Whether you know Dr. "Tom" well or not we hope you will know him better after you read the interview with him and the sketch of his life on page R-180.

★ ★ ★

If membership in Dick's Twenty-Five Year Club is international in its scope maybe Dr. Vladimir N. Ipatieff, director of chemical research of Universal Oil Products Co., of Chicago, would be eligible to membership.

We say maybe because over in Russia 40 years ago the young researcher possibly was not thinking about "putting more octanes" in gasoline or squeezing two gallons out where one was being recovered then. He was a scientist and not an oil man.

Whatever he may have had in mind in 1899 certainly he has had a profound influence on today's oil refining methods. Within the past year a considerable number of U.O.P. catalytic poly plants resulting from Ipatieff's work, have been installed in U. S. Refineries and are recovering polymer gasoline from cracking still gases.

We bring this up today because Dr. Ipatieff is in the news. He has just given $21,000 to found a chair of high pressure chemical synthesis at Northwestern University, Evanston, Ill. Universal Oil Products Company joins him in the gift by furnishing laboratory equipment.

The Ipatieff High Pressure Synthesis Laboratories will be the first of their kind in this country. When they open this next fall students will come to Northwestern to study fundamental phenomena which takes place during chemical changes either with or without catalysis. Efforts will be to find out just what mechanisms are involved.

Dr. Ipatieff's gift to an American university is one which will endear him to oil men. We have known for some time that Dr. Ipatieff has adopted this country as his permanent home. The gift speaks loudly of his love for a people who have welcomed him here.

The endowment is in the best tradition of the industry. In recent years many oil men and companies have aided higher education. You remember many gifts like those of the John D. Rockefeller and U. O. P. a few years ago for fundamental research at American universities, the Waite Phillips gift of the school of Petroleum Engineering at the University of Tulsa, and Skelly Oil Company's endowment gift to the Tulsa school.

★ ★ ★

On the train between Tulsa and St. Louis the other night was C. C. Herndon, vice president of Skelly Oil Company, and his 17-year-old son Tom who will be graduated from Tulsa High School in a few weeks.

Mr. Herndon was going east to an A.P.I. committee meeting and Tom was going along to visit several universities in the east.

Like many youngsters Tom has not decided yet just what he will do. He is interested in science and has made good grades in mathematics. His father started out in law and now is an oil executive. Tom is interested in general business, in engineering and in law.

As he started east Tom was tentatively thinking of two or more years of liberal arts at some school like Princeton to be followed possibly by engineering at M.I.T., Law at Harvard or Oklahoma or business administration at Lehigh or Wharton.

It makes you feel younger to think about the problems of boys like Tom Herndon. Do you remember when. . . . ?

Yours truly,

Managing
Editor,
Refining Technology Edition.

Chatfield Appointed R-T Managing Editor

J. C. Chatfield

With this issue REFINING TECHNOLOGY goes under the immediate management of J. C. Chatfield as managing editor. And with this issue are inaugurated the first of what we believe will be a number of improvements in the editorial character of the paper. These improvements look to making "R.T." more comprehensive in its scope but at the same time giving the important news of the oil industry's vast and progressive technical world so that the busy technician can get what he wants and needs quickly.

Mr. Chatfield brings to this new position an experience with oil and its world of technology that few men have. He has seen oil industry science grow from the rough, he has welcomed the army of men who have come to its ranks. He has worked with and known hundreds of these men as they revolutionized the art of refining and the manufacture of natural gasoline.

Mr. Chatfield joined the staff of NATIONAL PETROLEUM NEWS after several years newspaper work in the southwest following his return from the war. He had been graduated from the University of Tulsa of which in later years he was for years a trustee. While serving in the Tulsa News Bureau of NATIONAL PETROLEUM NEWS Mr. Chatfield became intimately acquainted with the refining industry and what is more important with the men who were making that industry great. Ten years ago he was transferred from Tulsa to the main publishing office at Cleveland. Here in various capacities, including that of news editor, he maintained his old contacts with the refining part of the industry.

We assure our readers that "R.T." will bring to them ever more interesting and valuable information of one of the greatest manufacturing industries of the world, under the direction of Mr. Chatfield.

Cleveland, O., April 22nd, 1939.

Warren C. Platt
Editor

Day Succeeds Bourque

The board of directors of the Western Petroleum Refiners Assn. has appointed John C. Day secretary succeeding A. V. Bourque, who resigned March 1 to become president of the Petroleum Sales Co. Miss Mary Sue Collins was appointed treasurer. Leon C. Grosjean was reappointed secretary of the Ark.-La.-Tex. division.

The board also appointed chairmen for various standing committees. They are:

Manufacturing—L. D. Mann, Cities Service Oil Co., Tulsa; Cracking Plant Inspection—W. F. Sims, Panhandle Refining Co., Wichita Falls, Tex.; Octane Committee—C. L. Mayhall, Anderson-Prichard Oil Corp., Oklahoma City, and H. W. Camp, Cities Service Oil Co., Tulsa, co-chairmen; Tractor Fuel—W. J. Carthaus, Deep Rock Oil Corp., Tulsa; Diesel Fuel—T. B. Rendell, Shell Petroleum Corp., St. Louis; Lubricants—W. E. Moody, Deep Rock Oil Corp., Cushing.

A Continuous High-Vacuum Still

The Bureau of Mines has developed a continuous high-vacuum still, and the systematic distillation of a 240-gallon sample in a semicommercial unit has been carried out. Afterwards the fractions so obtained were repeatedly distilled in the laboratory high-vacuum unit, which showed that the constituents tended to concentrate in four boiling ranges. The distillation results are compared in the same stages with the lubricant fraction and naphtha fraction of a Ponca City crude.

Copies of the report may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., price ten cents.

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REFINING TECHNOLOGY

May 3, 1939

See page 20 for other contents

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New systems have been developed for accurate control of solvent dewaxing and extraction of lubricating oil stocks J. F. Thornton and T. T. Whipple report in a paper before the Oil World Exposition at Houston R-171

Dr. T. G. Delbridge of Atlantic Refining Co. who is the second oil man to head the American Society for Testing Materials has spent 30 years building the research and development department of Atlantic R-180

The Natural Gasoline Association of America is holding its eighteenth annual convention in Tulsa this week. Nineteen years ago "Casinghead" gasoline was in ill repute because of kerosine blends and wild product. The association's research program has helped make "Natural" gasoline respectable R-183

An important field before the natural gasoline industry is the application of new processes such as polymerization to the production of high octane blending stock. F. B. Mack reports on the economics of thermally cracking butanes and polymerizing catalytically, in a paper before the Natural Gasoline Association of America R-188

743.
745.

Solvent Processes Develop New Control Systems

By J. F. Thornton* and T. T. Whipple*

(Presented before the Oil World Exposition, Houston, Texas, April 24-29, under the title, "The Application of Automatic Controllers to Solvent Refining and Solvent Dewaxing Lubricating Oil Plants.")

ABSTRACT

The unusual problems offered by the exact operation of solvent refining processes have produced unique and specialized systems for automatic control.

Instrumentation and control valves represent 7-10% of the cost of recent installations of these units. The complicated heat exchange system employed requires an elaborate specialized system which is outlined in this article. In a furfural unit, for example, liquid level in extractor tower is controlled by a weighted float which sinks in the raffinate layer, but floats on the extract layer, which latter is usually greater than 1.0 specific gravity.

In benzol-ketone dewaxing systems, close oil-solvent ratio control is essential. Must have orifices for each stock, calibrated for the viscosity at the operating temperature. Ratio flow controllers are used. Specially designed float controls with air pilots are used on wax filters. Control of flue gas "blanket" system used in these filters is complicated, and the system is shown here in its major details.

THE comparatively recent commercial development of solvent refining and solvent dewaxing processes has been materially assisted by the use of automatic control instruments. The importance of instrumentation in modern lubrication oil plant design is indicated by the fact that instruments and control valves represented 7-10 per cent of the total material cost of several recent installations. From the refiners' standpoint, the correct application of instruments in the design of solvent lube units results in accurately controlled product specifications, labor savings, low solvent losses, and smooth operation.

Generally speaking, several applications of instruments to each control problem are usually possible, and those presented, while not the only feasible ones, represent the control methods found most satisfactory by the authors.

*The Lummus Co.—New York.

Solvent Refining

For purposes of definite examples of solvent refining unit control, we shall consider a furfural extraction plant, (Fig. 1.). In this type unit, charge oil and furfural are continuously charged to the bottom and top respectively of a counter current extraction tower wherein the ratio of solvent to oil and the temperatures are regulated to yield the desired products. The tower overflow or raffinate layer containing the valuable lube fractions is charged through an exchanger and heater coil to a vacuum tower for recovery of solvent. The bottom or extract layer, containing the naphthenic constituents of the charge oil, settles due to its higher specific gravity (about 1.1) and is continuously withdrawn from the extractor and charged to the recovery system. It passes through exchangers and a heater coil thereby effecting solvent recovery by evaporation. The residue from the evaporator towers is released into a vacuum stripper, and the finished extract bottoms are pumped through a cooler to storage.

The stripper condensate streams are charged to the upper section of a tower wherein separation is effected between dry furfural at the draw-off pan and a constant boiling mixture of water and furfural at the top. The overhead is condensed and the furfural rich layer, which separates out on condensing and cooling and constant boiling mixture, is charged to a small fractionator. The overhead is condensed and the water layer, which separates, is withdrawn from the bottom of the fractionator to the sewer.

The automatic control problem presented by an extraction tower process is one of maintaining constant volume ratios of solvent to oil and simultaneously holding predetermined top and bottom extractor temperatures. Volume ratios are satisfactorily handled by the application of flow controllers in each stream with the orifices in the discharge lines and the controlled valves in the steam lines to direct acting pumps or in the discharge lines of centrifugal pumps.

The temperature of the top of the extractor is controlled by a vapor pressure type instrument with the

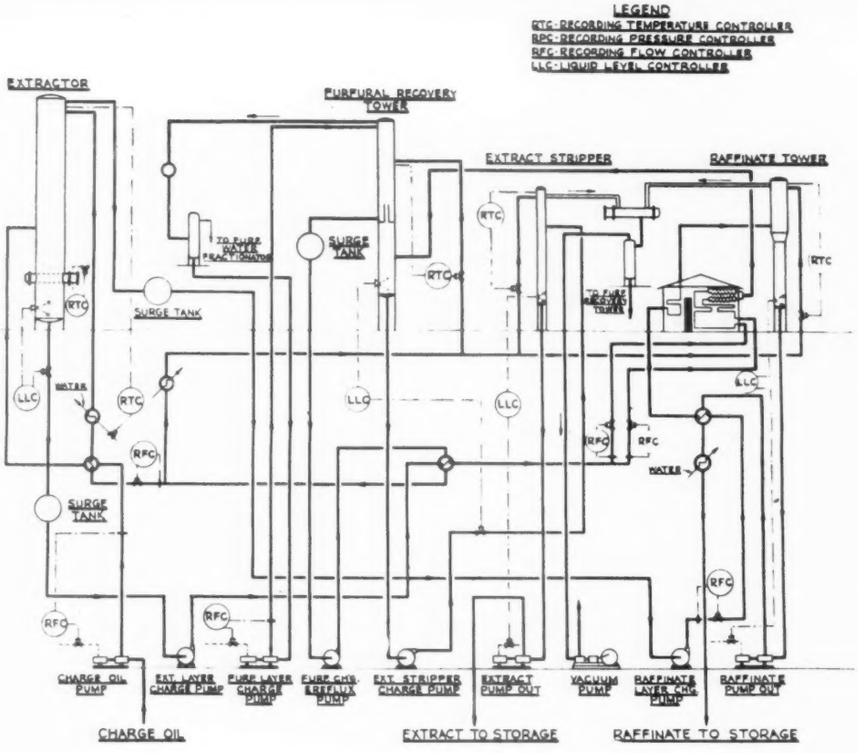

Fig. 1. Flow chart of furfural solvent extraction unit, the automatic control of which is discussed in this article

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bulb located in the top of the extractor and the controlled valve in the water line to a solvent charge cooler. The temperature of the bottom of the extractor is usually controlled by a vapor pressure system controller with the bulb in the bottom of the extractor and the controlled valve in the water line to a cooling bundle which extends through the extractor near the bottom. The process lag is relatively large in this case because of the large volume in the extractor with respect to the flow toward the bottom, but the application of this type of controller has been found satisfactory in practice.

The liquid in the lower portion of the extractor tower consists of a bottom layer or extract phase containing a large percentage of solvent together with the undesirable oil fractions, and an upper layer or raffinate phase consisting of the valuable lube fractions with a small percentage of furfural. The automatic draw-off of the extract layer from the tower is usually controlled by an internal type due-gravity level controller. This instrument employs a weighted float which will sink in the raffinate layer, (specific gravity approximately 0.88) and float in the extract layer (specific gravity approximately 1.10).

An interesting indicating instrument has been used in Europe for this service. The difference in electrical conductivity between the raffinate and extract layers is utilized to make or break circuits across electrodes placed vertically a few inches apart in the side of a vessel, thereby closing or opening circuits to a row of lights on the instrument panel.

Furfural, like most commercial solvents, boils over a very small range and at a much lower temperature than that at which most lube oils begin to vaporize and so is readily separated from the extract and raffinate phases by evaporation and stripping. The normal refinery temperature control problem is in connection with units wherein a separation of a multicomponent mixture is made by fractionation. Usually in a solvent lube unit the boiling points of the solvent and of the lube oil are so widely different that the separation approaches a single component evaporation problem. It is essential that this difference be recognized when considering the application of temperature controllers.

Reflux is generally used in solvent evaporators for desuperheating vapors only where reasonably close control is required for smooth operation rather than for any fractionating control. The recovery system top tower temperatures are maintained in the conventional manner by vapor pressure or potentiometer type instruments controlling the reflux streams.

Furnace temperature controllers are usually provided on solvent refining units to insure against overheating of the finished oil and for generally smooth operation. Furnace outlet temperature control is not required for optimum yield as in distillation and cracking units, but rather for the efficient operation of the comparatively complicated heat exchange systems found in solvent refining units. Due to the comparatively low boiling range of the usual solvents, considerable vaporization takes place before the heater outlet is reached, making it desirable to provide for two or more parallel streams, converging in a common transfer line to the flash tower. It is desirable that each of the parallel heater streams be flow controlled. Due to the high percentage of vaporization in the heater of what is essentially a single component, the temperature within the coil is not as sensitive to heat input variation as is the case in a normal pipe still. In the design of most solvent plants the direct-fired heater is used to complete the final evaporation of solvent just prior to stripping. When the evaporation is carried to this extent the outlet temperature is reasonably sensitive to heat inputs as can be seen from Fig. 2. Satisfactory control can be obtained by the use of a temperature controller with the element in the transfer line and the controlled valve in the fuel system. In this connection it is important that the heater be properly designed to accommodate the large amount of vaporization without the introduction of a temperature peak within the coil.

The use of various evaporation principles in solvent recovery systems sometimes involves the control of pressure in a system wherein the vapors are completely condensed. The pressure in such a system can be maintained by a recording pressure controller, permitting indirect control of the rate at which condensation occurs in an overhead vapor condenser. That is, the pressure controller actuates a valve in the condensate outlet raising or lowering the level of the subcooled liquid, thus blanking off a portion of the total available condensing surface, resulting in control of the tower back pressure.

No special instruments are employed in furfural refining units, but several comments on general operating practice may be of interest. In units handling waxy stocks the oil flow meters are usually equipped with water seals and the leads and seal-pots are steam traced. It is desirable to provide solvent flushing lines to meters handling extract and oil-solvent mixtures, also to connect drains and vents to the main solvent drain system. In general, averaging type internal floats are used to eliminate difficulty from plugging of waxy stocks and extracts and also to insure the smoothest possible operation. This point is particularly important in this type unit because most of the flows within the unit are determined by level control from tower bottoms and accumulators. The inherent

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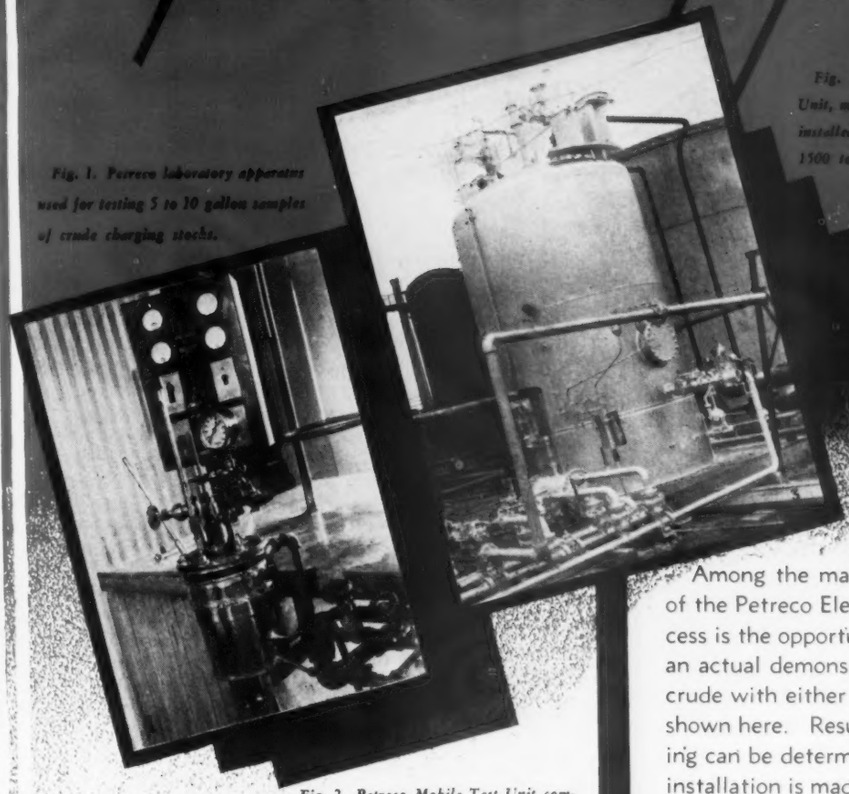
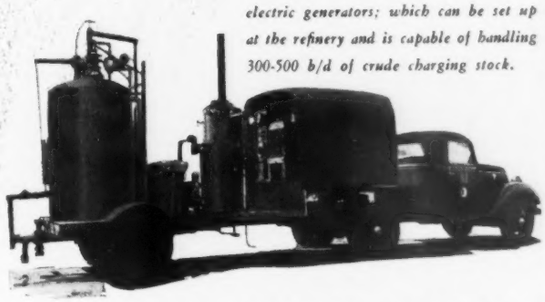


Fig. 1. Petreco laboratory apparatus used for testing 5 to 10 gallon samples of crude charging stocks.

Fig. 3. Petreco Standard Type Testing Unit, mounted so as to be moved easily and installed at the refinery, for running from 1500 to 2500 b/d of crude charging stock.



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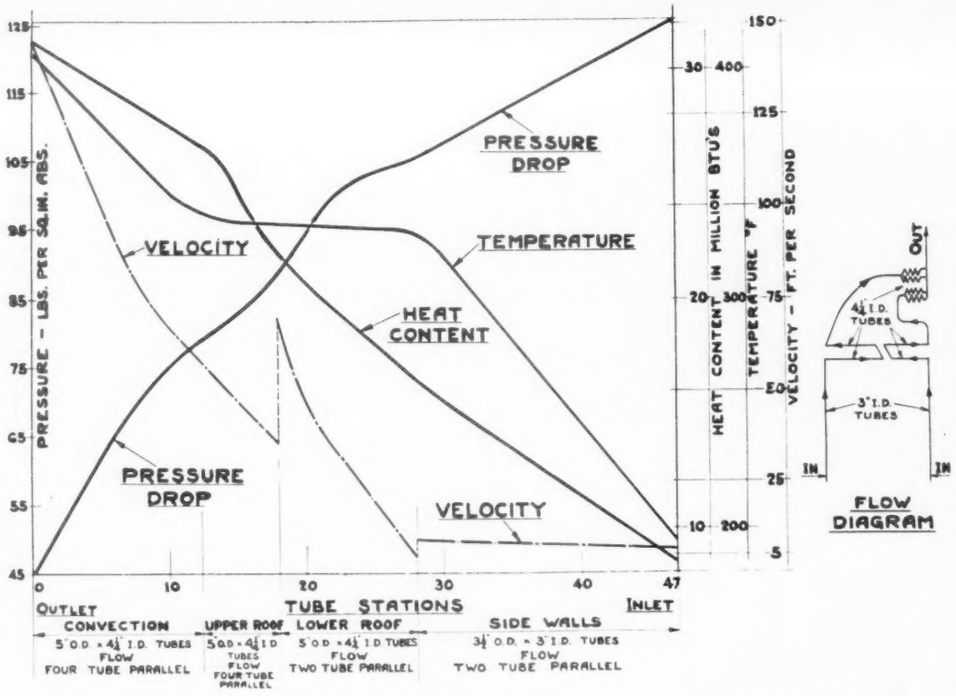

Fig. 2. Curves which show the heat content-temperature-pressure relationships in solvent recovery units

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and distinguishing feature of solvent lube units that necessitates very close correlation of levels and flows is the continuous recirculation of the solvent.

The solvent dewaxing process, which uses benzol-ketone mixtures and is the most widely adopted of the modern dewaxing methods, will be used to illustrate control problems (Fig. 3). In this process oil and solvent are mixed and then chilled in double-pipe units by exchange and by direct expansion of ammonia. This chilled material is then fed to continuous rotary vacuum filters where the wax is separated, washed with solvent and discharged to a flow receiver. The filtrate is withdrawn to vacuum receivers and pumped through the double pipe exchangers to the solvent recovery system. There the filtrate is heated by exchange and direct fired or steam heaters in order to evaporate most of the solvent. The residue from the evaporators is steam-stripped at atmospheric pressure.

The slack wax from the filters is heated by exchange with solvent and exhaust steam and settled to remove any water introduced with the charge oil. The solvent is then recovered from the wax in a manner similar to that outlined for recovery of solvent from the filtrate.

The overhead from the strippers is condensed and settled so that the water is withdrawn as a water-ketone layer. This water layer is charged to a small fractionator in which the net water is removed from the bottom and a constant boiling mixture of ketone and water is taken overhead to the slack wax mix settling tank.

Accurate control of the solvent to oil ratio is essential for optimum results in solvent dewaxing. Ratio flow controllers are widely used for this service. Normally, dewaxing plants handle oils from 100 SUV at 100 degrees Fahr. to 200 SUV at 210 degrees Fahr., and where oils with such a wide range of viscosity are to be metered by orifice it is advisable to investigate the orifice coefficient for viscosity correction. Errors introduced by varying viscosities are reduced by maintaining line velocities at the orifice as high as possible.

If we consider the application of ratio flow controlling to dewaxing units it becomes obvious that it is desirable to have a set of orifices for each stock because the various lube stocks are processed at different charging rates and with different ratios of solvent. Further, the coefficients for each oil orifice should be corrected for the viscosity of that particular oil at its normal charging temperature. In practice this is accomplished by providing interchangeable orifice fittings for both oil and solvent charge lines and sets of orifice plates with corrected coefficients. This phase of flow controller engineering is of recent development, and is probably of greatest value to operators of solvent dewaxing units.

Split flow of the oil-solvent mix through the chilling units is frequently desirable from the standpoint of pressure drop and this complicates the problem of mix ratio control. Further, the rate of charge is determined in the final analysis by the rate of filtration. A satisfactory control set-up for this type system is illustrated in Fig. 4. Recording flow controllers are used on the individual streams through the chilling units. The solvent charge pump is regulated by a pressure controller maintaining a constant discharge pressure and a ratio flow controller actuates a valve in the steam to the oil charge pump. The effluent from the chillers enters a surge tank from which the filters are fed by gravity. The level in this tank is recorded on the main control board as well as indicated

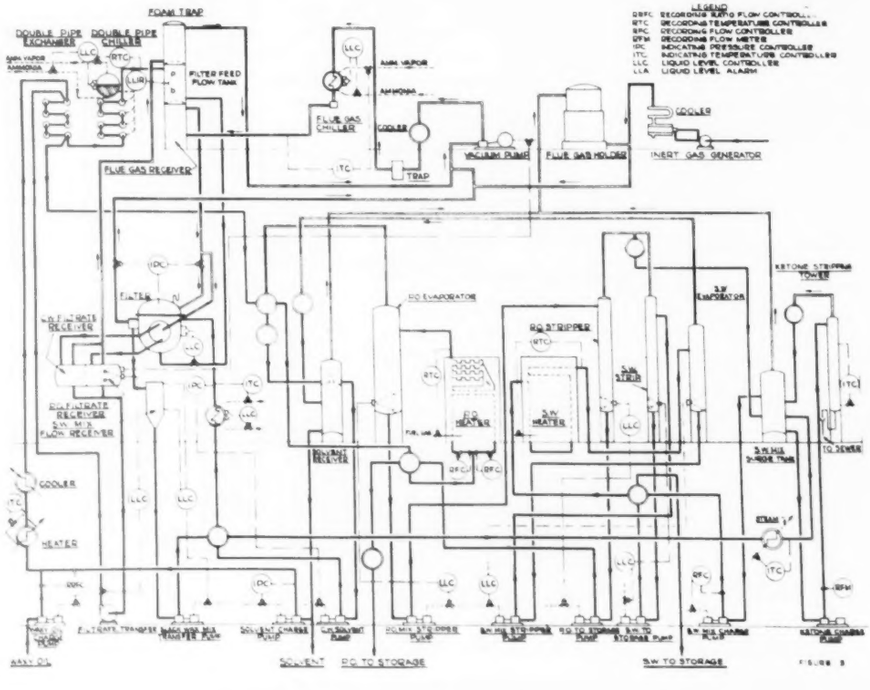
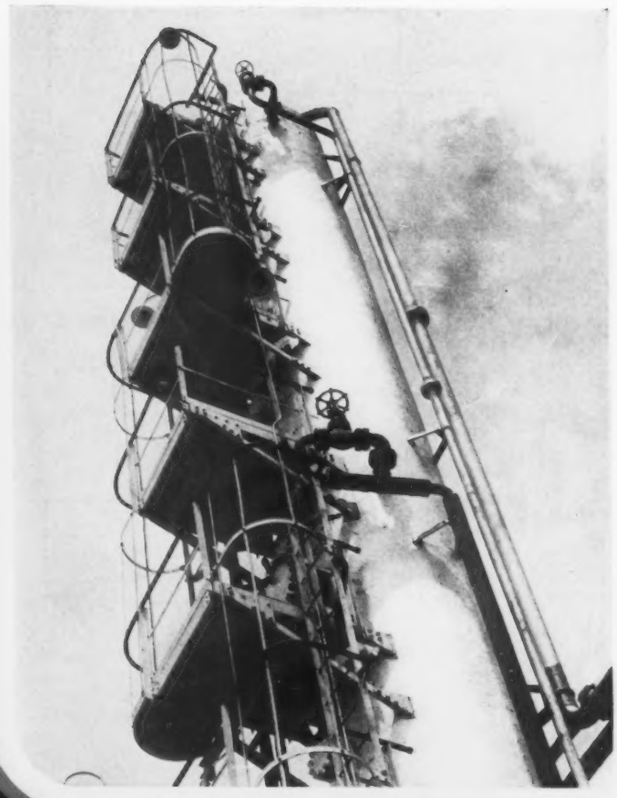


Fig. 3. Flow chart of benzol-ketone dewaxing unit for the control of which new methods are used



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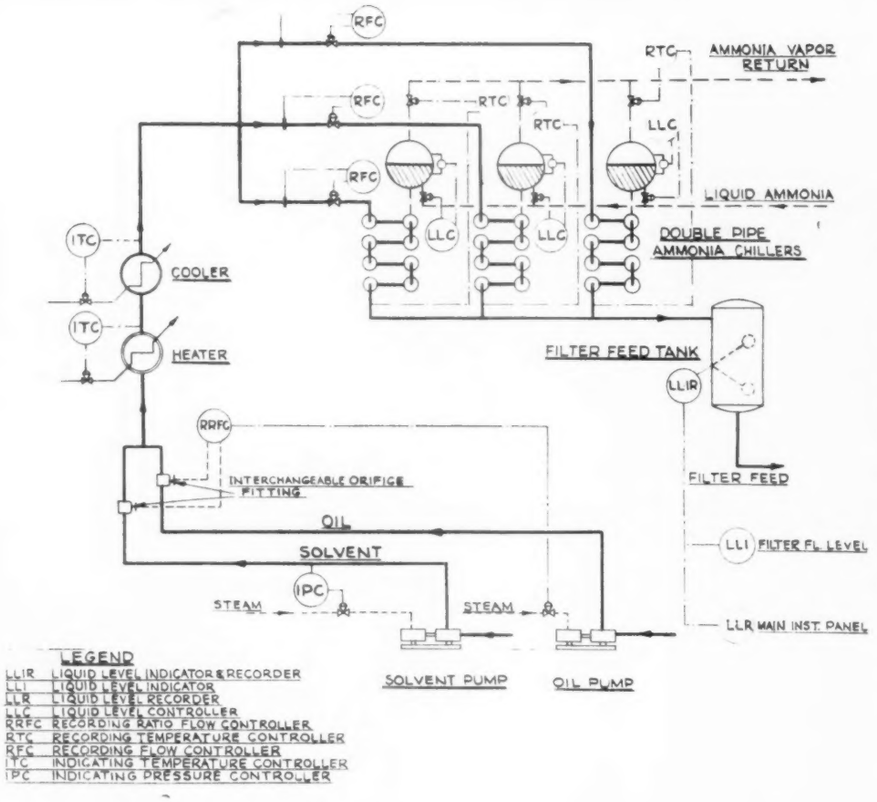

Fig. 4. Control system set-up for split-flow through chilling units in solvent dewaxing

in the filter room. The operator re-sets the individual stream flow controllers to maintain the desired level. Various automatic level resets have been tried in this service, but manual control has worked out more satisfactorily. The reason is that with any automatic reset device, upsets in charge rate occur as filters are cut in or out of service. An operator, on the other hand, can let the feed tank level run low just before he stops a filter for its periodic washing and then likewise allow the feed level to run high just before starting a filter, thereby taking full advantage of all available surge capacity with minimum flow changes. Manual attention to this detail is very simple and effective in actual practice.

The problem of indicating or recording the level of the waxy mixture in the filter feed tank is met by using an internal float with air pilot. In order to be able to utilize all available surge capacity, a special type internal float mechanism is used. The ball float is attached on an arm at right angles to the pilot shaft which enters through a small tangential nozzle. Consequently, the float can travel through a 180-degree arc, thereby allowing a level recording range nearly equal to twice the tank diameter, if desired.

The temperature of the solvent-oil mixture leaving the double-pipe chillers is an important control point. Liquid filled type temperature controllers are normally used to regulate the evaporation of ammonia to obtain the desired mix temperature. This control is accomplished by installing the controlled valve in the ammonia suction line to the refrigeration plant. Thus, the final outlet temperature of the solvent oil mix is controlled by the back pressure maintained on the direct expansion double-pipe chillers. Excellent results have been obtained in approximately minus 25 degrees Fahr. service by equipping these valves with radiating finned stuffing boxes and valve positioners to eliminate valve sticking troubles caused by freezing. The important low temperatures in solvent dewaxing units are also recorded using nickel resistance type elements. Particular attention must be given to the location of thermowells in systems containing precipitated wax so as to avoid accumulation of wax on the thermowell. Experience indicates that the most satisfactory location is perpendicular to the flow in a straight pipe run rather than in elbows or corner fittings.

For years, it has been standard refrigeration practice to use a very simple direct acting float chamber type level controller for regulating the level in ammonia accumulators on chilling equipment. These have been abandoned in the more recent design of solvent dewaxing units because of their tendency to stick and their lack of control characteristics. In their place, standard kidney type floats and air actuated diaphragm valves are used for holding ammonia accumulator levels. This equipment gives excellent results in this service. The level controls in this case simply maintain the liquid ammonia level in the chillers while the ammonia vapor back pressure valve actually controls the outlet temperature.

The solid slack wax cake from the filters is discharged by a screw conveyor into a flow tank from which it is pumped to the solvent recovery system. The problem of controlling a level in these tanks is very difficult because of the semi-solid nature of the material. Satisfactory results can be obtained by using a manometer type level controller with a carefully regulated continuous "bleed-back" of solvent to keep the lead lines free from wax. The conveyors dump the wax cake into the top of the receivers, and consequently internal float controls are difficult to employ.

The feed to the rotary vacuum filters is by gravity from an overhead tank and is regulated by level controllers on the individual filters. Kidney float type levels with air pilots are used, and a continuous cold solvent wash is employed to keep the kidney free of wax. The floats are especially designed so that solvent can be introduced around the float shaft to keep it free from wax and also to minimize level disturbances. Radiating fins are provided to prevent the shaft from freezing. The valves used to control the feed of the cold waxy mixtures are of the butterfly type equipped with radiating fins and connections for periodic flushing with warm solvent. This system of filter level control operates in completely satisfactory manner. The butterfly valve is especially adapted to this service where a low pressure drop is allowed due to the low head gravity feed and because the flowing mixture has a tendency to plug at any point where there is an appreciable resistance to flow. In this particular application tight-shut-off is not necessary.

The rotary vacuum filter used in this process for the separation of precipitated wax consists of a sectionally divided cylindrical drum which can be revolved inside a closed vat. The chilled oil-solvent mixture in the vat is maintained at a level corresponding to about 60 per cent drum submergence and the filtrate is withdrawn through a rotary valve. This rotary valve consists of a multi-port plate which rotates with the filter drum, sealed against a machined fixed head through which the dewaxed filtrate, the wash solvent and a portion of the inert gas are withdrawn intermittently as the drum rotates. The wax cake formed on the drum periphery is discharged by blowing with inert gas through the rotary valve. The instrumentation of this portion of the plant must be applied to op-

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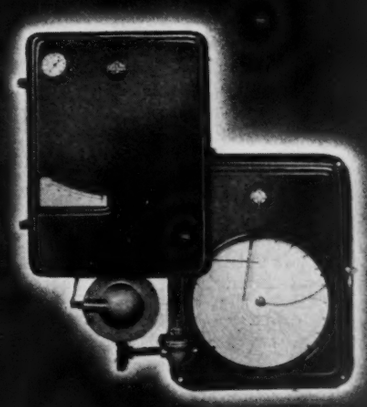

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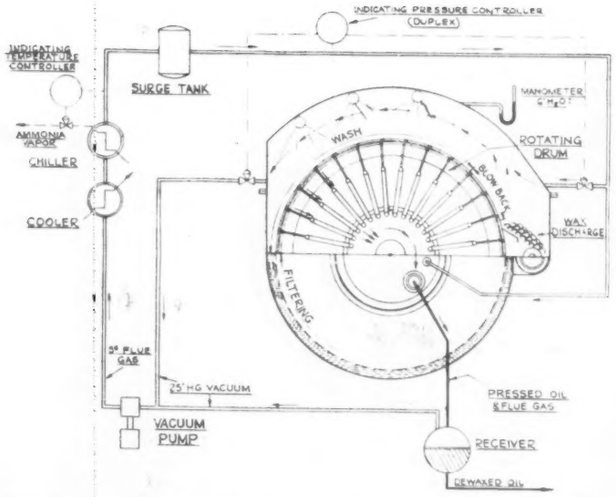

Fig. 5. Primary flue gas circuit used in filter system as safety measure

erate in a supplementary manner with respect to the rotary valve.

It is desirable to maintain a constant low pressure blanket of chilled flue-gas over the filter drum and this presents the most interesting related control problem because of the variable and intermittent factors involved. The primary circulating flue gas circuit as shown in Fig. 5 consists of a vacuum pump taking suction from the filter hood through the filtrate tanks and discharging through coolers, chillers and surge tank at approximately 5 lbs. gauge pressure back to the filter hood through the rotary valve. The variables affecting the circuit are first the quantity of gas withdrawn through the cake into the filtrate system and second, the amount of gas blown into the hood through the blow-back system used to discharge the wax cake. Both of these items are beyond the usual control of the operator, since they are primarily a function of the wax cake characteristics.

UNTIL recently the method of maintaining a constant pressure of chilled flue gas in the filter hood was to use a circulating blower and a multiple diaphragm low pressure gas regulator. A simpler, more positive and sensitive method of control has been developed recently. The application consists of a duplex indicating controller with the hood pressure acting as the control point and two diaphragm valves actuated from this single instrument. One diaphragm valve is located in the pressure gas line to the hood, and opens to admit gas when the hood pressure falls below a control setting. The other controlled valve is in a line from the hood to the vacuum pump

Fig. 7. Rotary type filters installed in benzol-ketone dewaxing unit

suction and opens to release gas when the hood pressure exceeds a control setting. The control settings which operate the two valves can be changed in the usual manner but they always differ by 1 inch water pressure so that when the indicating pointer is between the two control settings, both valves are closed. The control element used is a spring-loaded inverted ball manometer. It has been found that this type of control contains sufficient dampening effect to prevent noticeable hunting, and on the other hand is sensitive within about 1½ inches water pressure.

The application of control instruments to dewaxing unit solvent recovery systems is similar to that outlined above for solvent refining units. The ketone fractionator charge is flow controlled, and the stripping steam to this tower is automatically regulated by a vapor pressure type controller to maintain a fixed temperature in the stripper about one-third down from the top. The feed enters on the top deck and by varying the temperature control setting, it is possible to vary the stripping action as desired.

In general, internal type floats are used in all wax vessels. Wax flow meters are provided with solvent seals, and the lower portions of the seal pots containing the wax are steam traced. An interesting type of Venturi meter has been reported for handling slack wax with various percentages of solvent. The entire inside is chromium plates and provided with solvent wash connections both upstream and downstream of the throat.

Snap action shut-offs are sometimes used to cut off the fuel to direct fired heaters in event of excessive tower pressures as a safety measure and to avoid the loss of solvent through relief valves. This type of instrument must be manually reset after the upset condition has

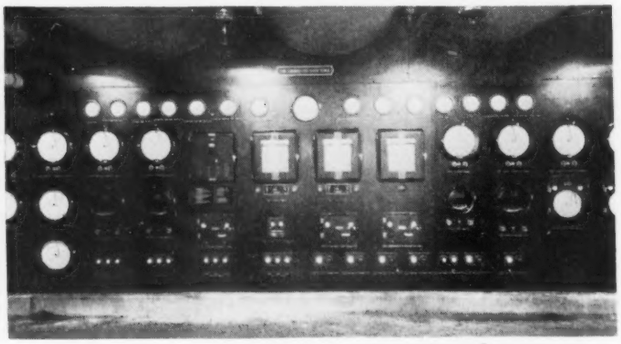

Fig. 6. Main instrument panel in 4400-barrel benzol-ketone dewaxing unit

been corrected. Emergency high level float shutoffs are occasionally installed on filtrate receivers to shut down the vacuum pump in order to prevent damage by liquid entering the cylinder. In general the application of instruments as safety devices is an important feature of modern instrumentation.

It is desirable to distribute the control instruments in a solvent dewaxing unit into three separate groups. In addition to the customary use of a main pump-room control panel certain instruments should be grouped in the filter room, and all chilling controllers should be separately grouped convenient to the refrigeration operator.

From a consideration of the few control problems described above, it is obvious that the successful commercial development of solvent refining and dewaxing processes depends to a large extent on the proper application of automatic control. The instrument manufacturers deserve a great deal of credit for their assistance in the application of controls and for their development of new instruments to meet problems that have arisen.

ON FOUR CONTINENTS

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An Interview . . .

With A Pioneer Who Saw The Oil Refining Industry Grow Up

FOR THE second time in its long history of outstanding service to industry the American Society for Testing Materials this year is headed by an oil man.

The first oil man to be president of the A.S.T.M. was Dr. K. G. Mackenzie of the Texas Co. back in 1931.

This year it is Dr. T. G. Delbridge ("Tom" or "Del" to you) research and development chief of Atlantic Refining Co. who is the pilot. He leads an organization which has been one of the most potent forces in shaping the trend and progress of American industry since it was first organized in 1897 as the American Section of the International Association for Testing Materials. In 1902 the present society was incorporated as a separate organization to cope more readily with the peculiar problems of American technology.

Two years after the present A.S.T.M. was incorporated Dr. Delbridge was a member of the faculty of Cornell University. Today he has been out of school work for thirty years but is still a teacher at heart.

Today, as it was a third of a century ago, "Del's" chief interest and real hobby is the training of young men. He gets a lot of practice in the art. Year after year under his supervision the staff of Atlantic Refining Co.'s research laboratories has been growing until now it numbers 195. Half of these men are full-grown technologists with varying scholastic training from bachelor and master of science to Ph. D.

Many of these men have come to Delbridge direct from college, full of half-digested facts and knowledge about engineering, chemistry and physics, rarin' to go and not knowing very clearly just where, or how to get there. It is his chief pleasure to commend a good job. It is a duty which he does not shirk to condemn a half done piece of work. It is his greatest satisfaction to help make top notch technologists out of the partially "refined" material which comes to his staff.

"Del" has a second hobby which gives pleasure to his friends as well as serving as a diversion from the cares of the day's work. On a hot summer day two years ago this writer called on Dr. Delbridge to discuss developments then current in the refining industry's news and that evening first heard him at his electric organ.

Delbridge denies that he is a musician but admits that he is a lover of music. Victor Herbert and Rudolph Friml are his favorite composers. Playing his favorite compositions is "Del's" means of relaxation and pleasure. Today he is looking longingly at the Novochord, that newest musical device of radio tubes and what not which is said to be capable of producing almost any type of musical sound which man enjoys.

Musician, school master, diligent researcher after facts, and an executive—such is the man who this year directs an association whose membership embraces 4000 men who have been working together for 40-odd years to give American industry accurate test methods so that users may know exactly what they are buying and manufacturers may know precisely how their goods will serve the user.

Tom Delbridge came out of Cornell in 1909 after serving for five years as an instructor in chemistry. At the same time he earned his Ph. D. and picked up a lot of chemical knowledge as well as teaching it.

J. W. Van Dyke, then president of Atlantic, invited Del to "flash" oils and run viscosities because he had an idea that one of those "doctors" could learn about the oil business faster and be worth more to his company than somebody who didn't know so much about how molecules can be kicked around and rebuilt to order.

When Del went with Atlantic his laboratory was in a single leaky shack so far out in the plant that he couldn't even get a gas line out to it for heating and testing. A steam line for the shack started out with 100 pounds pressure but by the time it reached the "laboratory" cold and condensation had done their work. The steam was down to 30 pounds pressure.

The roof was repaired finally and the 30-pound steam was supplemented with a 3-burner kerosine stove. It was on this stove that experiments were conducted that required more heat than the steam would provide.

Visits Other Labs

Delbridge wanted to know how other oil companies did their work so he went out to Chicago to see the laboratories of Standard Oil Co. of Indiana, which was already a pioneer in hiring technologists to study oil. Del looked, and listened. Then he went back to Philadelphia determined to strengthen the Atlantic research organization which now numbers 195.

With this staff, Delbridge and the Atlantic company have done much pioneering. Then, the old cracking still was a man-killer. Blow up one of those old 200-barrel, carbon steel shells, borrowed from the old crude still battery, and somebody usually got hurt. Metallurgists were fighting just as strong a battle as were the refiners, but they hadn't made alloy steels to stand even 100 pounds pressure at 850 Fahrenheit degrees, in a shell six or eight feet diameter, full of boiling oil that flashed a 20-foot spurt of flame the instant it touched the air. The tube still with its thread of oil to make cracking a safer plaything was yet to come.

The Lewis stills were devised, to heat the oil, not in the weak shell but in a bank of parallel tubes alongside. Yields were high for that time, 25% being a common figure, and these stills were used for ten years or so, when they were replaced by the then new Cross process.

Petroleum is made up of thousands on thousands of chemical compounds, carbon and hydrogen being the building "bricks", with a little sulfur, and nitrogen and some oxygen mixed in to add variety and confuse the chemist. Refiners spend millions each year to learn how to separate some of these compounds from the others, to get those they want for some particular purpose. Some of the heavy ones are fine for lubricating oils, others somewhat of the same kind and hanging around the good stuff, are bad medi-

cine. Distillation will not separate these different oils well. So 15 or more years ago refiners started trying out solvents, liquids which will take out one kind of oil molecule and leave the other kind, a process called solvent extraction.

Dr. Delbridge started his force to studying the peculiar ability of these solvents to "clean up" lubricating oils, back in 1926. People were asking for oils that would stand the gaff of hotter, more powerful engines; refiners were rummaging through technology's bag of tricks to learn how to make them. Atlantic hit on a smelly substance made from coal tar, nitrobenzene, which is a good "roundup horse" for cutting the no-good molecules out of the herd and leaving behind the "beef stock" of good lubricating oil. The refinery built a unit to use this process and still operates it.

Looks to Future

No matter how much technologists may think they have accomplished in ferreting out scientific secrets of petroleum in the past, it is to the future we look for the greatest discoveries in all technology, Delbridge the veteran is certain. How we work out those things and what we find lie alike in the minds and the energies of our young chemists and engineers, those we are training now to take the places of the older pioneers who have blazed the trail and who will pass from it.

Catalytic cracking of oil is one of the intriguing new tools that refiners are hustling about getting acquainted with. A catalyst is an outsider; it may be some kind of earth or a chemical, brought in by the technologist to help do a job otherwise difficult or impossible to do without it, or to do it easier or cheaper. The catalyst is put into the oil, breaks it up to make gasoline or home-heating oil or some other wanted product, but doesn't get mixed up in the product made, and stays behind to help more oil over the hurdle.

Commenting on this topic Delbridge says, "in the rush of getting on the new catalytic bandwagon, we mustn't overlook the unexhausted possibilities of thermal cracking. So much we still do not know about cracking with heat and pressure. We must learn more of that, and use it along with these new catalytic methods that have promise in refining technology. Like any new process catalysis will eventually settle down to its proper and important place in making refining products better and cheaper, in conserving petroleum resources. It will supplement but not displace thermal cracking."

"The diesel engine will come into its own by leaps and bounds. It will not replace the gasoline engine", he says, "but will supplement it." It has a large place for heavy work in commerce and industry, in aviation and other fields. The old idea that the diesel will burn just anything is out; engine and fuel must be developed together. The engine must be made as accurately as our gasoline engine is built, or it will never reach its peak of perfection." To prove their faith in this idea, Atlantic is spending more on diesel fuel research now than the amount of their business in that field warrants, believing it will pay dividends in the future.

Delbridge has not confined his extra-curricular activities to the A.S.T.M.

To help bring order out of the early chaos Delbridge tackled the task of collecting the many methods used by the industry for Day's Handbook of the Petroleum Industry. Into a single chapter in this book he wrote the unstandardized tests used here and there by oil laboratories. These methods he put into standardized form as far as practicable. Although this was not an A.S.T.M. job the assembly furnished much of the timber from which many of our present tests have been built.

In 1921, three years after Delbridge had been made chief chemist for Atlantic, a petroleum section was organized within the American Chemical Society. "Del" was elected its first chairman. With him as secretary that first year was W. A. Gruse now widely known for his work at Mellon Institute of Industrial Research.

Delbridge is a veteran also of the Co-operative Fuel Research Committee set up by the S.A.E., the A.P.I. and the A.S.T.M. to measure the knock ratings of gasoline.

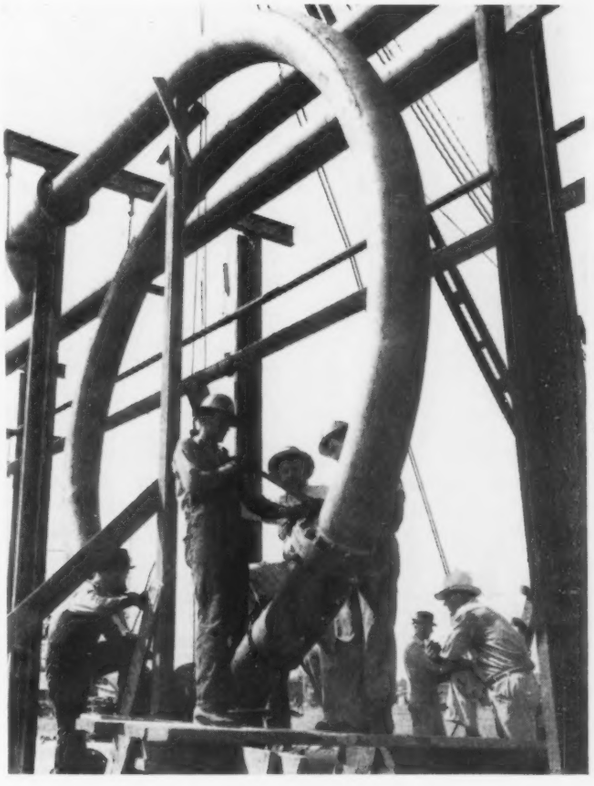
A few years ago engineers began talking about "octane numbers" as though they were something hidden in gasoline. Soon people began to want "octanes" in their gasoline and refiners started making gasolines with more octanes. Immediately they were bang up against the same old trouble—how to measure the "octane number". This job was so big and so important that it brought together the best technologists in both oil and automotive industries.

The C.F.R. built an octane testing method; built a special engine to do the job, then rebuilt it and changed it and built it again, threw it away and started again, finally worked out a test in 1932, then sent the whole thing to the A.S.T.M. which revamped it some more and adopted it. Now they know still more about gasoline and the testing of it.

A better method must be worked out, which may be a two-way method. "Instead of saying, this gasoline is 76 octane number", Delbridge thinks, "We may have one octane number method, and another test which will show how the gasoline's properties change under different conditions. So we may have two tests which will tell us, for example that a gasoline is 76 octane number with a sensitivity of 1.5".

Delbridge has done this committee one of the greatest jobs ever done for industry, yet he has a long way to go. And he stops to remark that a great deal of credit for its work is due to Dr. T. A. Boyd, its capable and hardworking chairman, and to Dr. R. P. Anderson, its able and critical secretary.

"There is plenty of opportunity in any branch of the oil industry," Delbridge said when asked if he would advise a young man to go into oil; "Where a man goes must be decided by his interests and his special capabilities. If he likes hard work, long hours and association with hard-working, long-working men, he has the first requisite for making his mark on the world through petroleum."



Installing a large bend expansion joint at a Texas refinery

N. G. A. A. Officers . . .

Joe La Fortune

The annual convention of the Natural Gasoline Assn. of America in Tulsa this week will mark the completion of the second term of that organization's president—J. A. La Fortune, vice president of Warren Petroleum Co., Tulsa.

A native of South Bend, Ind., and a former student at Notre Dame University, La Fortune entered the natural gasoline industry only 14 years ago, his entrance being due to his desire to earn, somewhere, $25 a month more than his regular salary as assistant secretary of the Mid-Continent Oil & Gas Assn.

La Fortune picked out W. K. Warren, president of the then young and relatively small natural gasoline company, and sold him on the idea of publishing a house magazine. Warren told him to try his hand at it. The job La Fortune did pleased Warren so well he prevailed upon the editor to join the company's staff.

Select anyone at random who ever has met La Fortune, ask that individual to tell the one outstanding thing they remember about that meeting, and the answer is almost certain to be: "His handshake."

La Fortune keeps himself in perfect physical trim. One of his favorite exercises is to take long walks. Anyone seeing him on those walks is likely to notice him constantly opening and closing his hands, and perhaps think he is nervous. What the walker really is doing, however, is exercising those arm muscles to keep that handshake in top condition.

One of La Fortune's hobbies is his large tung tree plantation on the Mississippi Gulf coast. He started the plantation several years ago, placed a brother in charge, and has watched the trees grow to maturity and to begin to pay dividends.

A recently acquired hobby is golf, and his friends say he already has developed into a tough opponent.

Shortly after coming to Tulsa back in 1919 and before he had obtained the position with the Mid-Continent Oil & Gas Assn., La Fortune was for two years on the advertising staff of the NATIONAL PETROLEUM NEWS.

Bill Lowe

Five years ago the directorate of the Natural Gasoline Assn. of America, on the eve of its annual convention, was faced with the problem of finding a new secretary almost over night just at the time when that organization was getting official recognition in code activities at Washington.

William F. Lowe was the answer to that problem. He left the staff of NATIONAL PETROLEUM NEWS at Cleveland, came to Tulsa and found himself tossed into the thick of the activities that marked the code and the P. & C. Committee activities of the oil industry.

Back in 1917 Chief Gunner's Mate Lowe spent the first part of the war aboard the Battleship "Massachusetts", and the remainder in charge of gun crews assigned to merchant ships.

Ex-chief Gunner's Mate Lowe became a student at University of Michigan after the war. He received his degree, majoring in geology and engineering.

The Mid-West Refining Co. gave Graduate Lowe a job in the Salt Creek, Wyo. oil field. Out in Wyoming Bill and Bonnie saved their newspapers during the summer in order to have a sufficiently thick layer of paper under the mattress in the winter time to help protect them from 40 below zero temperatures.

Then there was the problem of wild horses. Lowe had to wire his garbage can to the side of the garage to keep the wild horses that roamed that area from using the can for playing tin-can shinny at night.

A strong believer in physical well being, Lowe does his daily exercises on a "chinning bar" in his apartment, and with a pair of dumb-bells he brought up to his desired weight of 20 pounds by generous use of type metal. It is hard to determine which he had rather do for recreation—play golf or organize a quartet.

His one trial, Lowe freely admits and jokes about at times, is his inability to remember names and faces.

N.G.A.A. Research Program and Hard Work Establish Natural Gasoline

By Allen S. James
N. P. N. Staff Writer

THE Natural Gasoline Ass'n. of America—organized to raise an adolescent industry with a very dirty face to a position of dignity and respectability in the world of petroleum—is holding its 18th annual convention in Tulsa this week.

How well that association has brought the natural gasoline industry to its present standing is known throughout the whole oil industry. The reasons back of the need for such an organization, and the steps that were taken in the struggle for success, are less generally known.

When the oil industry began to settle down to normal in the two years following the World War, the natural gasoline manufacturers—then called the "casinghead gasoline manufacturers"—suddenly found themselves in bad repute with the public.

For several years the largest purchasers of "casinghead gasoline" had been the major refiners who blended the material with kerosine or distillate, then fractionated the blend to obtain a motor fuel. Some of the casinghead manufacturers had attempted to get some of that motor fuel business by blending the "raw" natural gasoline with kerosine and shipping it direct to jobbers. That had proved very unsatisfactory. The "trade" began to talk against those blends.

Then in 1920 the major refiners ceased to be large purchasers, due to changes in refining conditions, and the "panic" in the casinghead industry was started.

Many manufacturers, in an effort to develop new markets, shipped all kinds of blends to jobbers; offered un-weathered material at price concessions far below the going price for straight run gasoline. The automobiles would not handle some of those blends, and the public began to look upon casinghead gasoline as an inferior and unsuitable product.

Prices had dropped, meanwhile, from around 26 cents a gallon all the way down to 6 and 7 cents a gallon. That was chaos. Prompt action was required if the "casinghead" manufacturer was not to pass into oblivion.

Early in 1921 there was called a meeting of all casinghead manufacturers. Seventy-two manufacturers in the Mid-Continent attended this meeting, worked themselves into quite a state of "let's do something right now," and agreed to join an association. The initial dues were set at $100 for each member.

When the time came to put the money on the table, however, only 16 manufacturers stepped up and obtained receipts for their century notes.

H. T. Ashton, now with the Lubrite division, Socony-

D. E. Fields

An organization somewhat unique is the Natural Gasoline Supply Men's Assn. which, since 1928, has been the supplier of the entertainment features at the annual conventions of the Natural Gasoline Ass'n. of America.

The entertainment this week in Tulsa, which will include the usual luncheons, will feature a "breakfast dance" at the Tulsa club. Dancing will start at 9 p. m. and breakfast will be served at 1 a. m.

President of the organization that is providing the entertainment is D. E. Fields, president of the Tulsa Boiler & Machinery Co.

Vacuum Oil Corp., St. Louis, was instructed to find a secretary. Someone had suggested an oil writer who had frequented Tulsa and the Mid-Continent for several years. Ashton started on a hunt for that man.

Playing chess one afternoon in the Tulsa Club with a stranger, Ashton suddenly remembered he was hunting a secretary, and asked the stranger if he knew a fellow by the name of A. V. Bourque. The stranger said Bourque was his best friend, because he was Bourque.

The hunt for Bourque ended, the association was organized as the Association of Casinghead Manufacturers, with W. M. Welch, Tidal Oil Co., president; J. C. Smith, Gilliland Oil Co., vice president; H. H. Goddard, Chestnut & Smith Corp., treasurer, and Bourque, secretary.

It was recognized that the association would have to foster many changes in practices and formulate many policies if the product was to be brought into harmony with the requirements of its potential market.

Ashton, in a speech before the association in 1936, said that chief among the plans made were (a) elimination of the term "casinghead" and substituting "natural gasoline"; (b) the adoption of standard and intelligent specifications; and (c) research activity.

After changing the name of the infant organization to the "Association of Natural Gasoline Manufacturers," the task of drafting specifications was undertaken. Even in 1921 there were more than 100 different grades of "raw" natural gasoline and blends in the Mid-Continent.

The first specifications committee finally drafted, and had approved by the association on July 12, 1921, specifications for seven grades of natural gasoline and four grades of "motor natural gasoline."

Under the guidance of Secretary Bourque and the diligent work of the membership committee the association grew. It began to re-carve for the manufacturers a place in the oil industry. The name was changed for the third time in 1926.

The preamble of the original Constitution of the association reads as follows:

"In order to more fully develop the natural gasoline branch of the petroleum industry, to establish and more fully exploit the superior qualities of natural gasoline with the view of increasing its use, to secure just and equitable freight rates and transportation conditions, to obtain fair legislation and such uniformity in manufacture as the interests of the industry may be deemed from time to time to demand, this association is formed."

No association ever has kept faith more diligently with its pledge.

The association assisted in the studies which led to

"Miss Hughes"

A young and very shy woman timidly asked Secretary A. V. Bourque of the Natural Gasoline Ass'n of America one day in June 1926 for a position as stenographer and bookkeeper. She said her name was Roberta Hughes, that she was a graduate of the Pryor, Okla., high school and had finished business college in Tulsa.

This native Oklahoman with a dash of Cherokee Indian blood was given the position. Today she is assistant treasurer of the association and of the Natural Gasoline Supply Men's Ass'n, has been the statistician since the association began gathering and compiling statistics, and still is known as "Miss Hughes" although she changed that name several years ago.

In private life she is Mrs. James G. Coman. Her one hobby is the Coman's wire haired terrier. Rain or shine, she can be found at some time after office hours in the small park near the Coman residence, "playing ball" with the dog.

J. R. Jarvis

A man with many hobbies is J. R. Jarvis, vice president of the Natural Gasoline Ass'n. of America for the past two years, and for more than eight years general superintendent of the Lone Star Gasoline Co., Dallas, Tex.

The hobbies include the Boy Scouts, study of rocks and minerals, and the collection of stamps, and in recent months large portions of golf.

Born near Brandon, Tex., Jarvis was a farm boy for a time, then a store bookkeeper. He spent his vacations the last three years in high school working as a carpenter and contractor.

Completing his high school education Jarvis taught school a year then entered Texas A. & M. College, graduating in chemical engineering in 1915. He was editor of the college annual and attained the rank of major in the R. O. T. C.

The cottonseed oil mill business held him for a time, then he joined the Galveston Gas Co.'s staff. The next move was to the Texas Power & Light Co., where he was draftsman, engineer and chief estimator.

The Lone Star Gas Co. employed Jarvis in 1918 as draftsman in the Fort Worth office. His advancement in that organization has been steady. He was loaned to the government for a short time to assist in the study of helium in Texas.

From draftsman Jarvis moved up to control chemist and assistant superintendent of Lone Star's Petrolia gasoline plant, then to superintendent, and finally to construction superintendent when the Gordon plant was built. In 1923 he was promoted to superintendent of the gasoline department, in charge of design, construction and operation of all gasoline plants. For the past eight years he had been the company's general superintendent.

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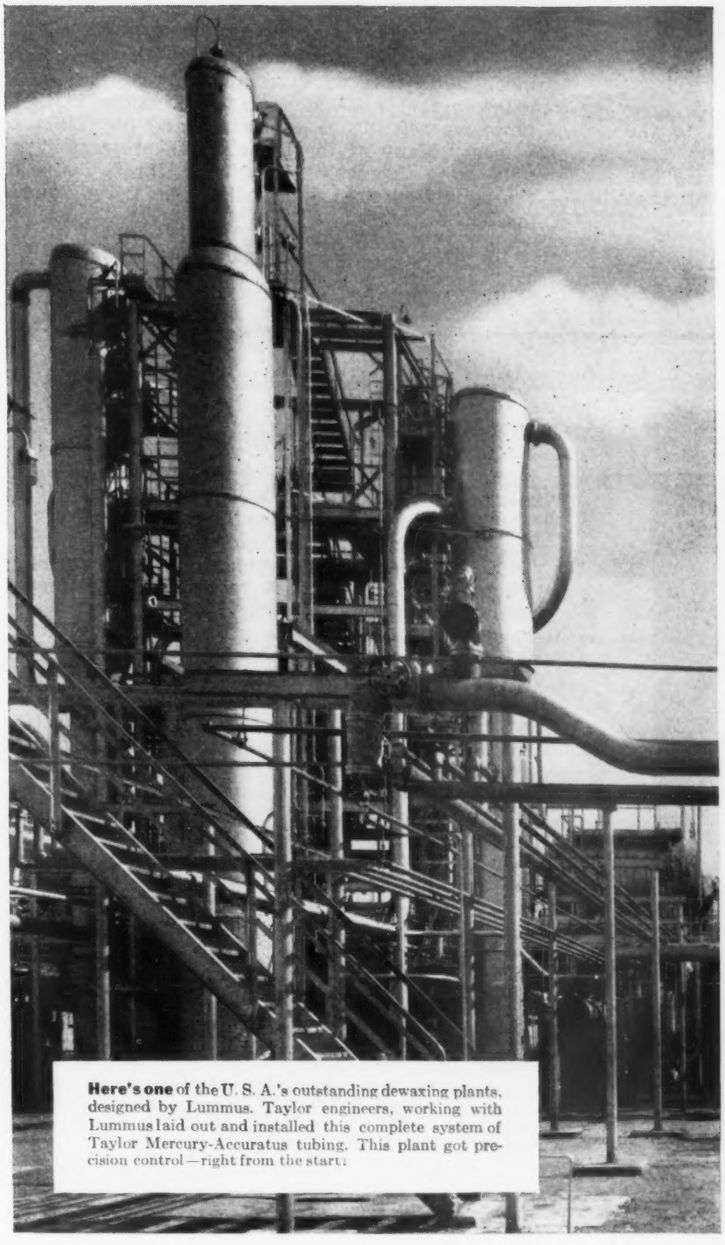

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the elimination of unfavorable transportation regulations.

Through the efforts of the association's various committees, chosen from the staffs of member companies, these valuable accomplishments were obtained:

Development of the Reid vapor pressure method for testing natural gasoline, motor and aviation fuels.

Development of corrosion, color, distillation and doctor tests for natural gasoline.

Development of natural gasoline grading system.

Development of standard specifications for steel tanks storing natural gasoline.

Development of specifications and testing methods for liquefied petroleum products.

Development of gravity balance and test procedure for determining the specific gravity of gases.

Development of standard procedure for determining the gasoline content of natural gas by charcoal absorption and comparison methods.

Development of standard casinghead gas contract form.

Development of plant report forms.

The association has sponsored or directed at least one major research project each year since it was organized. Chief among these projects is that carried on at the University of Michigan under the direction of Dr. G. G. Brown, professor of chemical engineering.

The association in 1925 assigned Dr. Brown to the problem of developing, substantiating and dramatizing the valuable characteristics of natural gasoline. He has been continuously engaged in various phases of that project since that time.

Another project of value to the entire oil industry was the Pawhuska Road Tests conducted in conjunction with the Western Petroleum Refiners Ass'n. in 1937 to study the fuel systems of 1937 model automobiles and the methods used to avoid vapor lock.

The tests disclosed that some of the fuel systems lost through venting some of the most important vapors, and that avoidance of this loss would save refiners an estimated $20,000,000 yearly and would eliminate an annual loss of $65,000,000 for the consumer.

The association four years ago staged the first of its now highly important "kinks" sessions at which plant and field men presented and explained the devices they had worked out to improve efficiency and to cut costs around the plant, in the field and in the laboratory. Prizes were offered for the best "kinks." The first session was scheduled for only half a day. So successful has been this feature of the annual program, however, that now a full day is devoted to that one subject.

No history of the Natural Gasoline Ass'n. of America would be complete without reference to the affiliate organization, the Natural Gasoline Supply Men's Ass'n.

This organization was formed in 1928 by the men who sell supplies to the natural gasoline manufacturers. Purpose of the organization originally was to provide the entertainment features at the annual conventions.

This organization has grown through the years, however, to mean more than an entertainment association. It has joined with the N.G.A.A. on many occasions in the study of problems relating to equipment and possibility of improvement. Many of the association's projects have been brought to a successful completion through the efforts of the supply men working with the various committees of the N.G.A.A.

Ray Miller

It is recorded officially in the minds of all oil men who know him that Ray E. Miller can:

1. Eat three fried chickens at one sitting.
2. Order a meal that is second to none.
3. Sense where an embryonic quartet is forming and get there in time to bring it to mature development.

Miller resigned as secretary of the Natural Gasoline Ass'n. of America five years ago to become affiliated with Hanlon-Buchanan, Inc. Since that time he has been elected a vice president of the association.

It was in 1928 that the association's directors invited Miller, then safety director for the former Marland Oil Co. at Ponca City, Okla., to become that organization's secretary and treasurer. He succeeded A. V. Bourque, who as secretary, had helped organize the association in 1921.

Miller had joined the Marland staff in 1920, first as an assistant to the manager of the insurance department. He was transferred to the safety section and was so successful that in 1925 he was given a leave of absence to organize the safety section of the Mid-Continent Oil & Gas Ass'n.

A native of Burlington, Iowa, Miller obtained his higher education at the University of Missouri.

The United States' entry into the World War found Miller in the air force. He served at Chanute field, for a time being assistant officer in charge.

After the war banking claimed Miller's attention for a time, with Mexico, Mo. his residence. It was from banking that he went to the insurance department of the Marland company.

Miller's friends know him as a most gracious host. They also know him as a genius at thinking up harmless practical jokes.

It is not recorded anywhere that Miller ever was seen to be excited, flustered or uneven-tempered.

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Economics of Catalytic Polymerization of Butanes*

By F. B. Mack**

ABSTRACT

Low finished gasoline prices have prevented wider adoption of gas polymerization by refiners. A 40% yield of polymer gasoline is obtained by thermally cracking recovered butanes, and catalytically polymerizing the cracked gases. Blend of cracked distillate of 66 octane number, natural gasoline and polymer gasoline gave 72 octane number fuel in which blending of polymer was 95. Blends with straight-run and other gasolines gives polymer blending values up to 102.

In the process, 62% of the normal butane and 44% of iso-butane are recovered from natural gases. These butanes are cracked, 1000 barrels per day in a furnace, and polymerized at about 400° F., with 1500 barrels per day of recycle.

Estimates of the cost of polymer production must include 1/2c per gallon royalty, and 1/2c to 3/4c for catalyst, along with the cost and operation of the butane concentration equipment and of the polymerizer unit.

THE Shamrock Oil and Gas Corporation has had twenty-six months' experience in the operation of a plant which employs a method for the cracking of and the catalytic polymerization of natural butanes producing a high octane blending value motor fuel. This plant is operated in conjunction with a natural gasoline plant and a refinery, both of which supply raw material to be processed. It is intended in this paper to present information obtained in the operation of this plant and also to show some of the uses for the products obtained as well as information which will give indications as to costs and values.

The octane value of butane makes it a desirable fraction to use in blending motor fuel, except that the use of butane as such for this purpose is limited to relatively small percentages because of its high vapor pressure. The polymerization process adopted by Shamrock offers a way to utilize butane where formerly no opportunity existed. The advantages thus obtained must be weighed against the cost to justify the investment and the operation.

At the outset it may be stated that there can be no question as to the desirability of this product for use as a blend to improve the octane value of motor fuel. The cost of production, however, has been such that with low motor fuel prices the refinery demand has not developed in accordance with normal expectations.

The natural gasoline manufacturer who has quantities of excess butane sufficient for the consideration of this method of utilization should be able to reach a conclusion as to its advisability after giving the proper weight to the factors involved and the probable effect of those factors in the individual case. Generally speaking, the factors to be considered are as follows:

(1) Quantities of butane available over a period of time.

(2) Added investment to regular natural gasoline plant together with added costs of operation and maintenance.

(3) Investment in polymerization plant and the cost of its operation and maintenance.

(4) Probable market for products obtained.

When those questions are satisfactorily answered as they apply in the individual case, there should be no difficulty in reaching a conclusion. It is the purpose here to present neither an over rating of the advantages nor to discourage those who are reluctant to take advantage of the opportunities which exist.

The Shamrock Oil and Gas Corp. found that it had available daily 600 barrels of butane at its McKee natural gasoline plant in excess of that normally contained in 26 pound RVP natural gasoline with 62% recovery of normal butane and 44% recovery of iso-butane. This extraction is obtained with an absorber pressure of 240 pounds per square inch and an oil circulation rate of eight gallons per thousand cubic feet and with the use of a compressor plant to recompress the non-condensable vapors for additional butane recovery. It was found that this butane supply could be increased to approximately 1,000 barrels per day if the vapor pressure of the natural gasoline manufactured were reduced from 26 pounds to 18 pounds RVP.

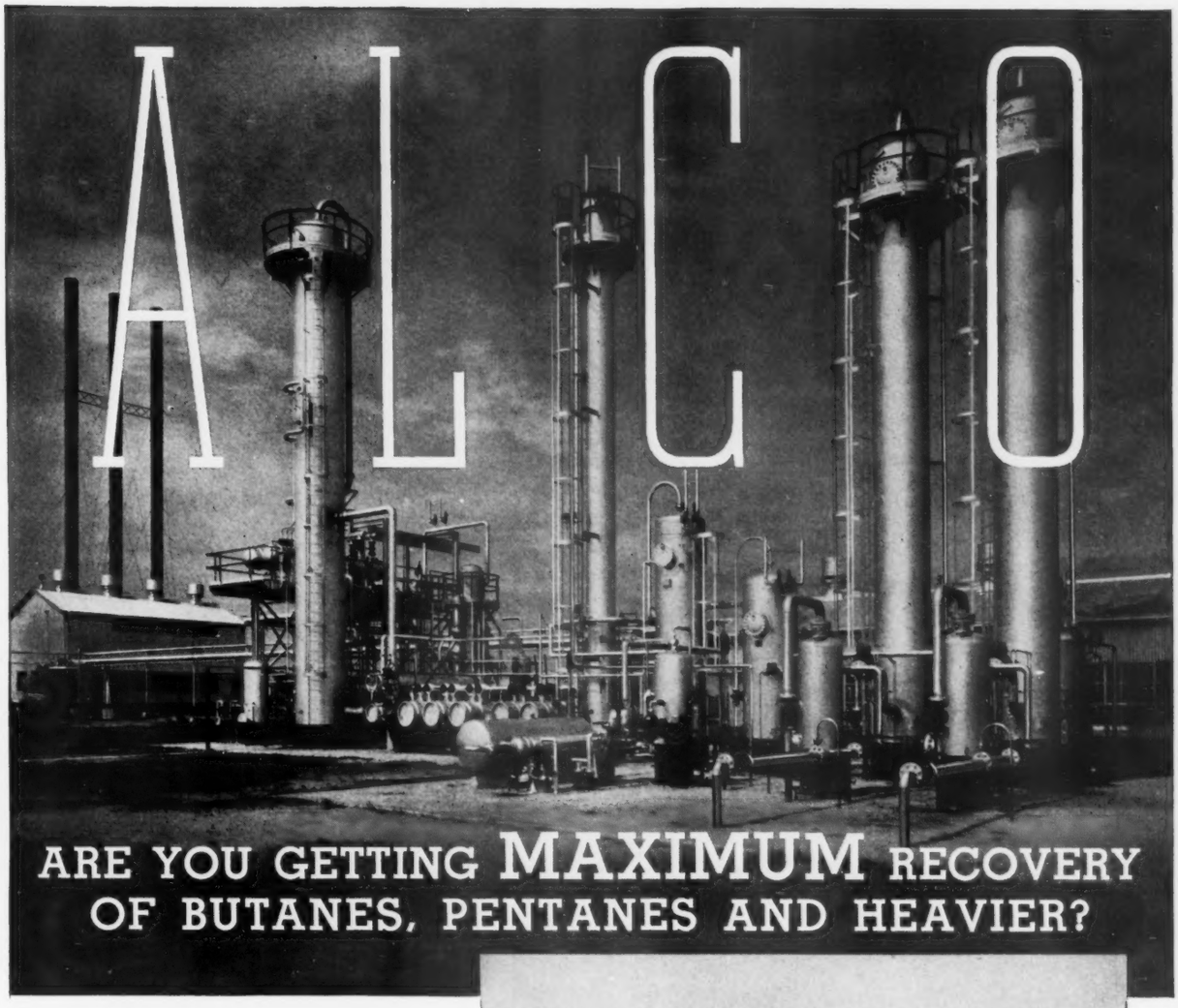
In order to provide for the recovery of butane in the quantities shown it was necessary for this company first to increase its gasoline plant equipment to provide for additional oil circulation, increased from a normal circulation of four gallons to eight gallons per thousand cubic feet of gas handled. This change necessitated increased heat exchanger and preheater capacity as well as additions to the stills in order to strip the increased quantity of oil circulated. A primary still was installed between the heat exchangers and the preheaters to be operated at 65 pounds per square inch pressure and at an oil temperature of 250°F. The purpose of the increased oil circulation was to obtain a greater percentage of the lighter fractions which are normally not required in the manufacture of natural gasoline.

All of these lighter fractions could not be condensed under the operating pressures and temperatures of the stills, and therefore, in order to effect the recovery of the butane desired, it was necessary to install a compressor plant to compress these uncondensed vapors to a pressure sufficient to recover the butane fractions. As an aid to recovering the butanes from the compressed vapors, the vapors were cooled to a temperature below that obtained with cooling water. This was accomplished by using the exhaust from an expander engine and expanding propane from the stabilizer to cool the compressed vapors in a chiller. This arrangement permitted a recovery of 92% of the butanes after extraction from the gas treated in the absorbers. The flow diagram of the natural gasoline plant which is included with this paper shows the conventional natural gasoline plant with these added features.

The cost of the raw feed to the polymerization plant

*Presented before Natural Gasoline Ass'n. of America, Tulsa, May 3-5, 1939.

**Shamrock Oil & Gas Corp.



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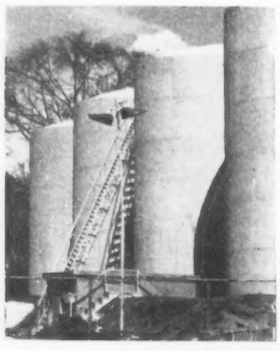

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WRITE FOR QUOTATIONS

A. G. P. ZERWER

Room 601—Central State Bank Bldg.,

WHITING, INDIANA

starts with the cost of the butane. To that must be added the cost, maintenance and operation of the additional equipment in the gasoline plant. It is not difficult in the individual case to arrive at this cost and apply the same on a unit basis to the cost of the finished product of the polymerization plant.

The cost of the polymerization plant when designed can be obtained on a quotation basis. The problem then becomes one of determining the cost of operation and maintenance of the polymerization plant and the recovery efficiencies which may be expected.

In addition to the cost of the polymerization plant and its operation and maintenance, the cost must include an allowance of one-half of one cent per gallon for royalty and from one-half to three-fourths of one cent per gallon for the cost of catalyst.

The maintenance costs are subject to some considerable variation. Shamrock has increased the length of runs between shutdowns from an average of about fifteen days to an average above forty days. The cost of labor and material for shutdowns at first was $1600 but this cost has since been reduced to an average of $800 per shutdown. The plant can be operated with two to three men per tower.

To the costs considered thus far must be added the cost of rerunning, handling and treating. It was first thought that a rerun unit would not be required, but since difficulties were encountered with the end point of the finished blends of motor fuel it was found necessary to provide for this procedure. The finished product is only slightly sour and a light treatment is necessary.

In considering a plant such as Shamrock has in operation, it should be kept in mind that the butane should contain a minimum amount of propane. The presence of propane in the feed has the effect of decreasing the capacity of the plant without compensation in yields. The utilization of propane for the production of polymers by the thermal cracking and polymerization method is receiving some attention, however, at this time and may ultimately offer possibilities. Since unit costs are vital to the profitable operation of a plant of this nature it follows that the rate of the charge must be maintained as high as possible.

Description of Process

The butane delivered to the polymerization plant is charged to a cracking furnace. The temperature and pressure of the furnace are controlled to permit the efficient production of olefins or unsaturates. The uncracked butanes are separated later in the process and returned to the charge tank to be recycled.

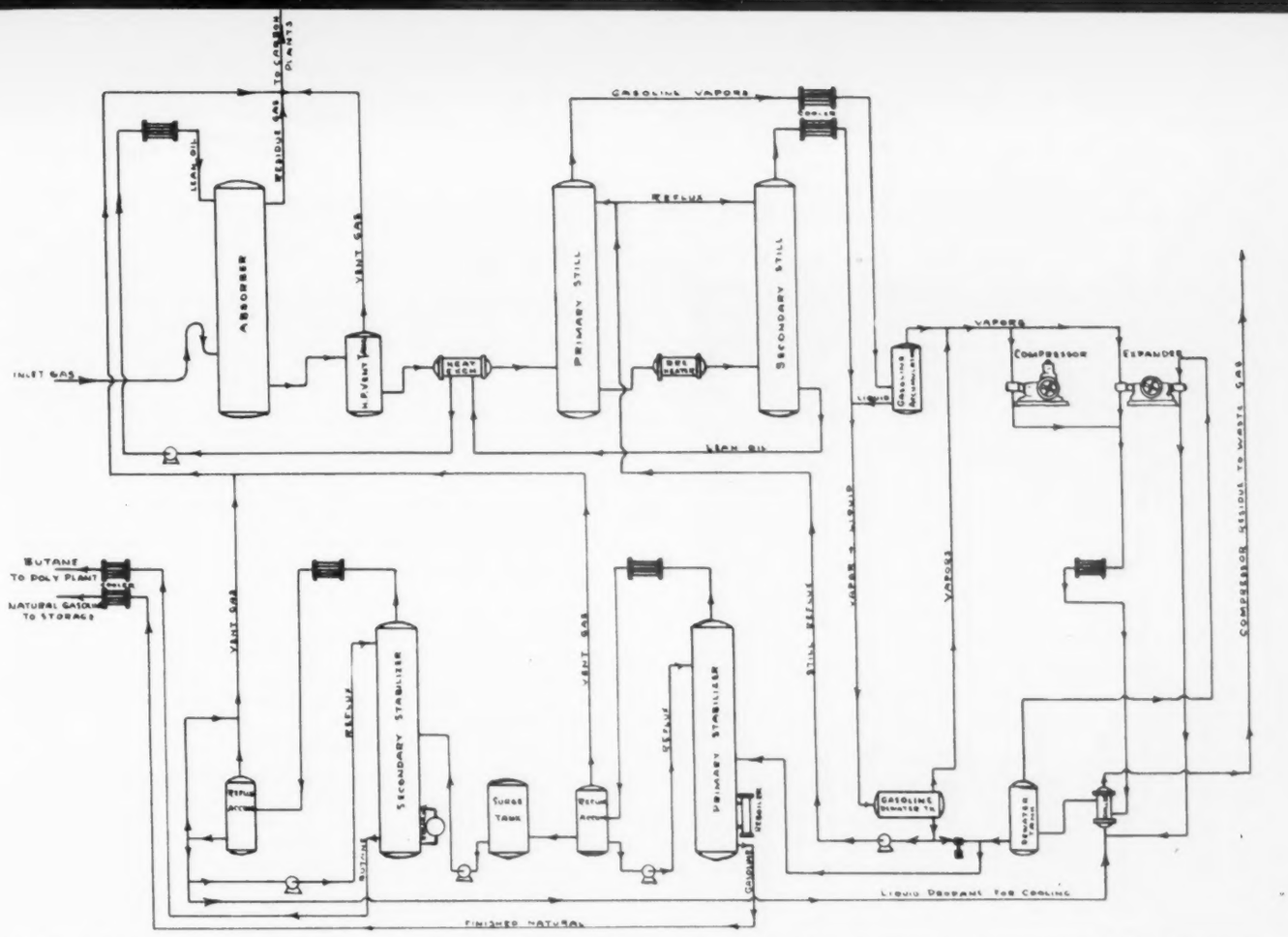
An analysis of furnace exit gases is given in Table 1:

Table 1

Hydrogen	15.00 Mol. %
Methane	4.48 Mol. %
Ethylene	.05 Mol. %
Ethane	5.53 Mol. %
Propylene	11.36 Mol. %
Propane	15.17 Mol. %
Iso-Butylene	1.18 Mol. %
Butylene	.82 Mol. %
Butanes	46.00 Mol. %
Iso-Pentane (plus)	.41 Mol. %
	100.00 Mol. %

The gases from the furnace pass through G-fin heat exchangers which are used as reboilers for the debutanizer column. After the heat exchangers, the gases are condensed in atmospheric condensers and pass on through a quench oil receiver into the demethanizer. A portion of the liquid is removed from the quench oil receiver and reentered into the stream at the inlet of the G-fins as a control of the temperature of the liquid in the bottom of the debutanizer column.

The demethanizer column operates at 310 lbs. pressure, with 150°F. bottom temperature and 90°F. top temperature. It is refluxed with an absorption oil for the purpose of making a separation between the ethane and lighter fractions and the propylene and heavier fractions. The bottoms of the demethanizer are fed into a debutanizer which operates at 275 lbs. pressure, with 480°F. bottom and 200°F. top temperature. The pyrolytic polymer production, which is formed in the butane cracking furnace, is removed from



1. Flow chart of Shamrock Oil & Gas Co.'s natural gasoline plant at McKee, Texas, where butanes are concentrated and delivered to the polymerization unit

the bottom of the debutanizer. A portion of this product is used as the absorption oil in the demethanizer. The debutanizer is refluxed with the overhead product removed from the debutanizer in the refinery. The overhead from the debutanizer, consisting of butanes, butylene and propylene, passes through a process heater where it is heated to about 380°F. to 410°F. and then passes through the catalyst towers. The olefin content of the gas entering the catalyst towers averages about 24%.

The catalyst towers are operated in series with three towers in use while a fourth tower is being reactivated. By rotation of the towers before reactivation the conversion efficiency is kept at a maximum. In this manner an average of 86% of the olefins entering the towers are polymerized. The vapors leaving the catalyst towers are condensed and then charged to the depropanizer. The depropanizer operates at about 310 lbs. pressure, with 220°F. bottom and about 90°F. to 110°F. top temperature. There is some ethane in the feed to the depropanizer which was not removed in the demethanizer, so it is necessary to operate the depropanizer column at a high pressure to condense a sufficient amount of overhead product for reflux. The bottoms, which are essentially propane free, are fed directly into the stabilizer.

The stabilizer operates at about 105 lbs. pressure, with 360°F. bottom and 140°F. top temperature. The bottoms from the stabilizer are in the form of catalytic polymer, the vapor pressure of which is controlled between 6 pounds 10 pounds RVP as desired for blending. The overhead product of the stabilizer which is butane is condensed and returned to the charge tank to be recycled.

This plant was designed to operate with a combined feed of 2,100 barrels and a fresh feed of 1,100 barrels, which would give a ratio of combined feed to fresh feed of 1.91 to 1. It has been found in actual operation that a ratio of about 2.5 to 1 of combined feed to fresh feed results in a higher conversion of butane to polymer. Thus, by increasing the combined feed to 2,500 barrels it was found that 1,000 barrels of butane could be handled in this plant more efficiently, and that a conversion of butane to 10 pound RVP polymer on a 40% yield basis could be obtained.

In this process of cracking and catalytic polymerization of butane two products are obtained. The first product made is pyrolytic polymer, which is formed in the butane cracking furnace and removed from the bottom of the de-

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butanizer. The second product obtained is catalytic polymer, which is made by polymerizing the olefins in the catalyst towers. The production of pyrolytic polymer is about 8% to 10% of the total polymer production.

Specifications of these two products are given in Table 2:

Table 2

	Before Rerun		After Rerun and Treated	
	Catalytic Polymer	Pyrolytic Polymer	Catalytic Polymer	Pyrolytic Polymer
Gravity, °API	64	43.2	66.1	57.6
R.V.P.	6.1	5.8	7.4	5.5
Doctor	Positive		Negative	Negative
Corrosion	Negative		Negative	Negative
Color	Blue		÷26	÷15
A.S.T.M. Gum	12.5 Mgs.		Nil	.5 Mgs.
Oxygen Bomb Ind.	45 Min.	15 Min.	90 Min.	60 Min.
Sulfur	.018%	.02%	.018%	.02%
Octane No. (L-3)	85.5	76	85.7	80.6
I.B.P.	100°F	122°F	100°F	116°F.
10%	150	168	142	158
20%	176	190	166	180
30%	191	206	188	195
40%	204	224	204	210
50%	220	247	220	226
60%	234	284	236	244
70%	260	345	256	270
80%	290	437	288	297
90%	338	492	326	324
E.P.	450	533	394	361
Recovery	97%	93%	98%	97%
Residue	1	1	1	1
Loss	2	1	1	2

The catalytic and pyrolytic polymer as made must be rerun through a distillation unit before they are ready for blending stock. The rerunning of the catalytic polymer lowers the gum content and improves the color. The bottoms removed in rerunning average 3 percent of the charge and are sent to the refinery, where most of it is blended with the pressure distillate.

The pyrolytic polymer as made has a dark amber color and a copper dish gum content of about 4,000 milligrams per 100 cc. In rerunning this product about 25 percent of the bottoms are removed and also charged to the refinery. The octane number in this manner is increased but the blending value is not as great as that of the catalytic polymer. The gum content by the A.S.T.M. method is reduced to about .5 milligrams per 100 cc.

Polymer production as a blending stock in motor fuel offers the opportunity of making finished gasolines with a wide range of octane values to meet market specifications.

Table 3 gives the specifications of four blended products.

In the first blend, pressure distillate with an original 66 octane rating was blended with natural gasoline and catalytic polymer to produce a 72 octane fuel. The blending value of the catalytic polymer in this blend was 95. In the second blend, straight run gasoline with a 50 octane rating was blended with catalytic polymer and natural gasoline to produce a 72 octane fuel. The blending value of the catalytic polymer in this instance was 102.

Table 3

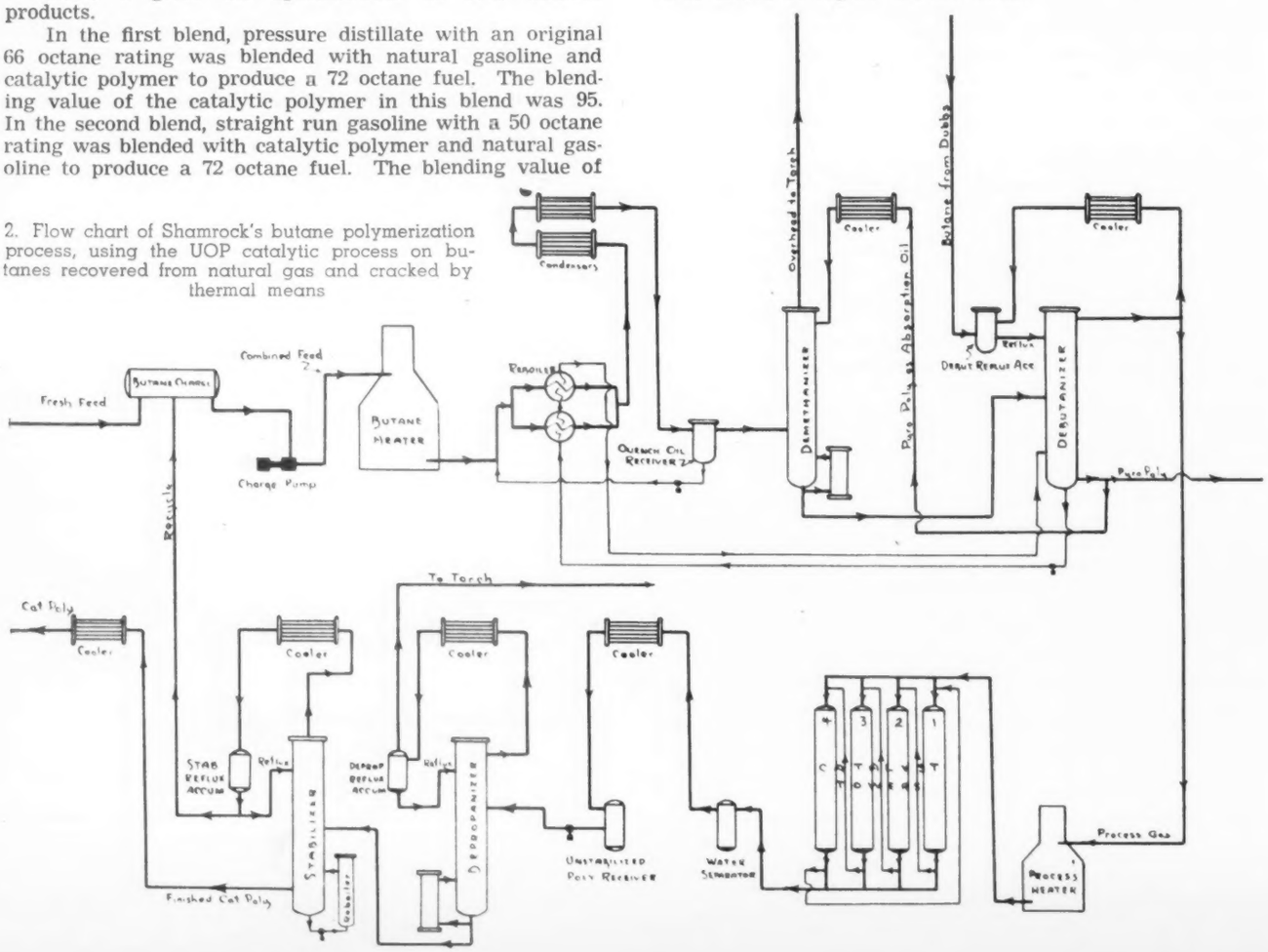
	2nd Grade Motor Fuel (1)	(2)	Special Blends (3)	(4)
Straight run	..	53%	30%	61.5%
Catalytic polymer	20%	41%	70%	38.5%
Pressure distillate	70%	..	..	....
18 lbs. Natural	10%	6%	..	....
Gravity, °API	61.7	64.8	65.4	63.9
R.V.P., Pounds	7.9	8.6	5.0	4.2
Gum, Cu. Dish	....	....	2.6 Mgs.	2.7 Mgs.
Sulfur	....	....	.04%	.085%
Octane No. (L-3)	72.9	72.4	83.0	74.5
I.B.P.	98°F	97°F		
10%	126	141	168°F	168°F
50%	225	226	214	213
90%	356	333	281	280
E.P.	403	385	322	335
Recovery	...	...	99.0%	99.0%
Residue	...	...	.5	.5
Loss	...	...	.5	.5

In blends number 3 and 4, a product was made which is comparable to some aviation fuels. The blending value of catalytic polymer in the 3rd blend was 95 and in the 4th blend it was 98. The low gum in these special blends was obtained by the use of an inhibitor. The gum was determined by first subjecting the gasoline to an accelerated aging test at 212°F. with oxygen at 100 lbs. pressure for four hours. Then 100 cc. of a mixture of the oxidized sample and gum solvent were evaporated and the residue reported as gum.

Conclusion

Polymer production is useful in blending special gasolines as well as regular motor fuel, and the possibilities of broader uses are still being explored. The greater percent has been used to blend the refinery gasoline to market specifications. The demand by other refineries has been limited as a result of the cost in comparison to low gasoline prices.

The desirable properties of polymer productions are, (1) high octane blending value, (2) low percentage of sulfur, (3) low gum content, (4) high inhibitor susceptibility in blends of low end point, and (5) distillation range of motor fuel requirements. The distillation range makes it possible to blend low grade gasolines to higher fuel specifications and the other properties make it possible to produce blends of higher market value.



2. Flow chart of Shamrock's butane polymerization process, using the UOP catalytic process on butanes recovered from natural gas and cracked by thermal means

Virginia Oil Men Meet at Richmond on May 11-12

TO THE Virginia Oil Men's Ass'n., which holds its annual meeting May 11-12 at the John Marshall Hotel, Richmond, goes the credit for starting the ball rolling for the first, national oil marketing code more than a dozen years ago.

It was in 1927 that the Virginia association drafted a code of ethics for oil marketers in the Old Dominion, obtaining approval of the Federal Trade Commission in the following year. Some months later, the American Petroleum Institute took up the idea of a national code, embodying many of the fair marketing practices set forth in the Virginia code. The so-called A.P.I. code, approved by the FTC in 1929, was ultimately signed by some 1200 oil marketing companies throughout the U. S. This code remained in force until rescinded in 1937.

The V.O.M.A. now composed of both major company representatives and independent marketers, has long been noted for its good fellowship. The office of president is rotated between major company officials and independents. Currently, the president is an independent oil jobber, Mc C. Higgins, Galax, of Higgins Oil Co., who has been working for some weeks in preparation for the coming meeting. He expects a large attendance.

First day of the meeting, May 11, will be turned over to the Virginia Petroleum Industries Committee, of which E. A. Kyhn, Richmond, is secretary. Following the P.I.C. meeting, there will be a supper with Ethyl Gasoline Corp. showing some motion pictures afterwards.

Among the speakers on the second day's program, May 12, will be Warren C. Platt, Cleveland, publisher and editor of NATIONAL PETROLEUM NEWS, and State Senator Dave Satterfield, Jr. That evening there will be a banquet, dance and entertainment, which affair is always a highlight of the Virginia association's meeting. D. D. Monroe, New York, of The Texas Co., who was formerly stationed in Virginia, will act as toastmaster.

Mc C. Higgins, president

A. L. Tenser, secretary-treasurer

The association was organized at a meeting of Virginia oil men, Sept. 15 and 16, 1926, at Richmond, J. B. Belk, Charlottesville, was elected as the first president. Other officers elected at that first meeting included: Vice-presidents, A. T. Dulaney, Ruckerville; P. S. Ford, Martinsville; and D. S. Thomas. On the first board of directors were: A. T. Dulaney, S. G. Thomas, J. C. Krouse, I. W. Bagwell, H. C. Watson, H. W. Van Horne, J. K. Cunningham, J. P. Landis and C. O. Maphis.

Originally, membership in the V.I.O.M.A. was limited to independents. In 1929, by unanimous vote, the word "independent" was stricken from the name and membership opened to any one actively engaged in wholesaling gasoline or other petroleum products in Virginia.

Besides Higgins, the president, other officers of the V.O.M.A. now are: Ben Morgan, Richmond, of Morgan Oil & Supply Co., vice-president; W. W. Payne, Norfolk, of The Texas Co., vice president; and A. L. Tenser, Richmond, who has long served as secretary. Directors are: Owen Maphis, Harrisonburg, of Maphis-Chapman Oil Co.; B. L. Ray, Richmond, of the New Jersey Standard; Otis T. Minitree, Petersburg, of Delta Oil Co.; Ira F. Walton, Roanoke, of Roanoke Oil Co.; W. A. Stokeley, Richmond, of Continental Oil Co.; and John O. Little, Norfolk, of Pure Oil Co.

Several years ago, Virginia jobbers organized their own association, the Virginia Independent Jobbers Ass'n. The jobber group holds its own sessions, usually in connection with the V.O.M.A. meetings. Virtually every jobber in the state, however, also belongs to the V.O.M.A., as well as the jobber organization, which now has as its president, R. G. Spratley, Petersburg, of Delta Oil Co.

Ten Million Flats

Represent Lost Opportunities For Tire Sales at Stations

How important it is that the station operator Serve his customer by exerting all his selling powers when the car needs tires, batteries, spark plugs, windshield wiper blades, additional oil or gasoline, or other servicing, is clearly demonstrated by an analysis of "trouble calls" received from members of the American Automobile Ass'n.

Applying the A.A.A. figures to the entire U. S. indicates that approximately 20,000,000 motorists drove out of filling stations last year with their cars still vitally needing some service or accessory, the lack of which later caused it to stall.

These figures are convincing evidence that Service (with the capital "S") means selling the customer all that his car needs to keep it in good running order.

IF TEN million tires went flat at the same time, in the same place—that would cause an awful lot of noise. And it wouldn't all be from blowouts. Some would be "cuss" words for the service station operator where the motorist last stopped, for not selling him a new tire when he needed it!

Of course, those ten million flat tires didn't happen at once, nor in the same place. But the American Automobile Ass'n. estimates that there were about that many cases of tire trouble in the U. S. last year—not to mention stalled cars because of dead batteries, worn-out spark plugs, and other reasons, which probably caused an equal amount of "cussing."

Those millions of stalled cars, in many cases, represent "lost" sales opportunities for the last station the motorist called at.

For instance, take the man who ran a bald-headed tire just a few miles too far and had a blowout on a country road. Suppose the station attendant who last filled his gasoline tank had called attention to the worn tire, pointing out, "she's likely to blow anytime now." He might have made the sale, and, if so, he certainly would have prevented a blowout. And that might have meant the saving of lives.

Instead, the station man didn't notice the tire or else wasn't convincing enough in his sales talk. Of course, there were many times when the station man did his best but the motorist didn't heed his advice and "took a chance on it 'til pay day."

The A.A.A.'s estimates of the causes of motorists' mishaps were based on reports from the 10,000 garages and service stations which are under contract with the national motorist organization to render free emergency service to Association members. By determining the average number of trouble calls among its membership, it is a simple mathematical stunt for the A.A.A. to calculate the approximate number of cases of road difficulty experienced by all motorists, and their causes.

For the statistically-minded, the A.A.A. has figured out that the hour between nine and ten o'clock in the morning is the most likely for trouble calls to come in, and that the hours after midnight, from 1 A.M. to 7 A.M., are the most trouble-free for motorists. Saturday is the biggest day for mishaps, with Wednesday the best-omened day of the week. January leads all the months from the standpoint of breakdowns, while September has the least.

So, a Saturday morning in January, between nine and ten o'clock, is the most likely time for the family car to pick for stalling or having a flat tire. Likewise, these figures show that the early morning hours of a Wednesday morning in September are more than likely to find the car free of trouble.

While tire troubles head the list of motorists' misfortunes, there were several other causes running over the million mark—and in each instance the figures represent a challenge to station salesmanship.

Battery troubles ranked second in the list of mishaps which the A.A.A. estimates happened to motorists last year—4,000,000 "dead" batteries.

Of course, a worn-out battery or one that needs servicing and charging is not nearly so obvious as a worn-thin tire. But with many cars having their batteries under the hood where the station man can check them when he puts in water or oil—and certainly when he is greasing, draining the oil or washing the car—the station man has many opportunities to check the battery. He can often "make" an opportunity by asking the motorist's permission to check his battery.

IF the car needs a new battery or the old one needs servicing or charging, you can bet your last dollar that the customer will be thankful to the station man for "selling" him, when he wakes up on a frosty morning and the battery turns over the motor without hesitation (especially if the neighbor down the street is trying to crank his stalled car).

Ignition troubles rank only a little below battery failures in point of frequency, the A.A.A. estimating that for America's 30,000,000 motorists there were 3,500,000 who experienced ignition trouble last year. Undoubtedly, much of this trouble was due to bad spark plugs—a rainy morning plus a dirty, cracked or fouled plug equals one stalled car. And many of these mishaps, too, represent "lost" opportunities for the neighborhood dealer because everytime he lifts the hood he could take a look at the plugs for

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Then you can lengthen cracking runs, increase gasoline yields, boost octane rating and hold down fuel oil production to what your market can take

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If you have no Dubbscracking unit you ought to put one in right away

Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
Owner and Licensor

Battery trouble is the Number Two motoring headache. Estimates based on reports from 10,000 A.A.A. garages indicate nearly 4,000,000 battery failures occurred in 1938

visible signs of wear. Or, if he finds that the customer complains his motor "ain't acting like she should," he could suggest cleaning the plugs and then getting a chance to sell new ones, if needed.

The A.A.A. estimates 1,350,000 motorists ran out of "gas" on the road last year, and either had to call for aid or walk the weary miles to the nearest filling station—and this despite the fact that there are upwards of 300,000 filling stations throughout the U. S.

"Measuring the 'gas' tank" is no longer the chore it used to be—raising up the seat, unscrewing the cap, and poking an inquiring stick into the blackness below—for virtually all of the cars on the road today have gauges on their instrument panel and have their tanks in the rear.

More than a million cars running out of "gasoline"—each time a filling station operator thinks of that figure it should encourage him in his resolve to suggest to all his customers, "Shall I fill it up?" The one time that he asks the customer "how many" and gets the usual "five will be enough, please," may be just the time that the motorist will try to stretch it out a couple of miles too far and have his tank run dry.

Of course, there'll be motorists who will still stand pat on "five, please," but the station operator will have the satisfaction that he did his best to prevent that motorist from being among the million to get stranded with a dry tank. Maybe, that statement—"1,350,000 motorists run out of 'gas' each year" would be the clinching argument for a tankful, instead of the customary five gallons?

The A.A.A. estimates that there were about 3,500,000 tow-in cases in 1938. These may have resulted from a number of causes, from the serious business of wrapping a car around a telephone pole to the less grave burning-out of a connecting-rod bearing, but in any case, they were bad enough so that they could not be repaired on the road and had to be hauled in by the towcar.

How many of these more-serious mishaps could be classed as "lost" opportunities for station selling, could not be stated. But certain it is that proper lubrication will go a long ways toward preventing bearing trouble, that a windshield wiper blade may help avoid an accident in bad weather, that a new tire is far less likely to blow out going 'round a curve, that a bulb in the headlight means one less "one-eyed" car to endanger lives, and that a good grease job aids steering.

Despite gas gauges and the large number of filling stations, nearly one-and-a-half million motorists ran out of gasoline on the road last year

And, now, it may be asked—why all this talk about "lost" opportunities? Didn't the stalled motorist have to buy a tire, battery, spark plugs, gasoline and needed services anyway? Yes, but many times the mishap occurred miles away from his favorite, neighborhood station. He had to buy on the spot—in most cases from the garage that sent the towcar or the station sending the service car. If a station has a service car the operator may get his share of emergency calls, it is true. But, if in addition to these trouble calls, he also uses all of his powers of persuasion to sell his own customers when their cars need servicing, then he will have just that much more business.

A large percentage of motorists' mishaps, the A.A.A. has pointed out, are "due to the fact that motorists have not yet been educated to the point where they take the requisite pains to have their cars in good condition at all times."

"This has a two-fold effect: It increases the costs of upkeep and at the same time delayed maintenance is a definite hazard to safe operation."

THERE is one angle of automobile maintenance, however, where the motorist is rapidly learning his lesson—and undoubtedly the filling station operator is doing his part in that education. The A.A.A. reports that for the past several winters, motor freeze-up calls have diminished each year, with the result that less than one-half of one per cent of all calls last year were on this account.

The A.A.A. estimates that 35,000,000 gallons of anti-freeze—most of it sold at service stations—were poured into car radiators in 1938. That shows that station operators were alert to opportunities of serving their customers by suggesting anti-freeze as soon as it was needed.

Station operators have educated their customers to put in anti-freeze as soon as the mercury starts heading below the freezing point. Backing up their sales efforts, of course, is the thermometer which warns the motorist of impending trouble from a frozen radiator.

When the station operators of the U. S. have been able to educate the motoring public against neglect of other danger points—such as worn-out tires—they will have contributed a great deal to the cause of highway safety.

Ignition failure ranks in third place as a cause of motoring difficulties; this usually happens in wet weather when spark plugs are worn-out, fouled or dirty

N.P.N.'s Reader Service On Reprints

Jobbers and other suppliers will find that this article contains convincing arguments that increased sales of tires, batteries, gasoline, oil, spark plugs, and other accessories are possible at stations. For those wishing to place copies of this article in the hands of their station operators and dealers, reprints are available at special prices in quantities of 100 or more. Prices and information on this, and other reprints, on request. NATIONAL PETROLEUM NEWS, 515 Penton Building, Cleveland, O.

ALKYLATION

BY BRAUN

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The reaction involves alkylation of unsaturates with iso-paraffins in the presence of concentrated sulphuric acid. In this line of work, we have broad experience. We have, in fact, built most of the large and successful liquid-phase sulphuric-acid-hydrocarbon reaction-units in the Refining Industry.

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ENGINEERS, MANUFACTURERS, CONSTRUCTORS

ALHAMBRA, CALIFORNIA

Hats off to Miss Phyllis Noble, advertising manager of Lincoln Oil Co., Boston, whose sales letter seeking business for the company's service stations was picked as best among 11,000 in a national contest

Sales Letter on Oil Wins National Prize

Having a trained copywriter prepare all sales letters, whether signed by a company salesman or the neighborhood dealer, is the plan followed by Lincoln Oil Co., large, independent distributor at Boston.

Adding novelty to this idea is the fact that the job is handled by Miss Phyllis Noble, who carries the title of advertising manager. She was formerly connected with a well-known advertising agency.

Besides sales letters, Miss Noble bears down on letters of the "need-not-be-written" type, such as those asking for appointments for salesmen to call, seeking the "why" of a lost account, thank-you letters for a new order, and others that build up and hold good will. Studying the company's operations closely for ideas, she often rides in the tank truck cab to get first-hand the customers' reactions.

How Miss Noble puts punch into her prize-winning letters is told in this article.

A BOSTON WOMAN advertising manager in as typically a masculine industry as petroleum may sound unusual, but to Phyllis L. Noble, advertising manager of the Lincoln Oil Co., oil jobber here, it "seems perfectly natural".

Miss Noble has just won a gold medal—top prize—for an oil sales letter she entered in a contest. Her letter was among 11,000 submitted by sales and advertising executives in all lines of business over the country. The contest, sponsored annually by The Dartnell Corp., Chicago, in an effort to raise the standards of business correspondence, requires that all letters submitted be written by the contestant and used by his company during the past year. Letters adjudged the most effective under these actual business conditions are awarded prizes.

With one six months' experience in the oil business, how did Miss Noble do it? "Because of a zest for advertising, a creative mind, a sincere interest and definite pleasure in my work", she says. She feels that advertising, even in the oil industry, is a wide open field for women, but believes that both men and women can bring to it vision, ideas, ability, and results.

She goes about acquiring general knowledge of the oil business by research, but to get information particularly about her own company's specific problems, she rides around on company trucks, talks to their drivers, and to company dealers.

"There is no end to the uses of good business letters in the oil industry", Miss Noble observed. She believes they not only can sell your products and your company, but can create and maintain good will. She writes letters to fit most any instance.

She writes letters asking for appointments for salesmen. She sends thank-you letters as follow-ups to their calls. When prices are raised, she softens the blow with a letter to the customers. Lost business she attempts to retrieve with a special "lost account" letter. Such a "lost account" letter, incidentally, also received recognition from the Dartnell company recently. Above all, Miss Noble says, she makes it a point to write those "letters that need not be written"—among them the thank-you letters and salesmen's appointment letters.

In her sales letters, Miss Noble avoids the "curt, stereotyped business letter". What she strives for is warm, human appeal, and a smile. All advertising people agree today that what advertising needs is the light touch, the smile.

This light touch and human appeal were evident in her prize-winning letter. The letter itself cannot be reprinted here, but it portrays the average man getting himself off to work in the morning. It tells in pithy, amusing paragraphs how he feels, how he resists getting up, what he thinks and what he does between 7 and 8:30 A.M. The dealer's service station is brought in at the point where this average man can't get his car started that cold morning. He remembers this dealer because he just got a letter from him—written by Miss Noble.

An effort is made to get this warm, human appeal into other types of letters, too, particularly in the "lost account" letters. The effectiveness of such a letter was proven recently when two replies came all the way from California. These were from former customers who had moved from New England to the West Coast. They answered, even though the company's marketing territory was back East, and confined to metropolitan Boston.

Miss Noble places great importance on this "lost account" letter. It not only gives the oil company a golden opportunity to correct misunderstandings with customers, but it gives another chance to go after business that stopped for "no special reason", as some of the replies indicate, or be-

LEADS IN POWER SAVES MORE GAS

• THE TRUCK OF VALUE •

General Motors Trucks, powered by valve-in-head SUPER-DUTY engines with revolutionary POWER-PAK pistons, have proved absolute power leadership! And GMC trucks, with 15% to 40% proved gas savings, lead in fuel economy, too! It is entirely probable that gas and oil savings on a 1939 GMC will finally pay all of the original cost of the truck! Thousands of owner records bear witness to this statement. Wherever the new GMC's operate in cross-country travel, or do much idling in traffic, rapid recovery of the purchase price is almost sure to result! Let your GMC dealer give you final facts—they're startling!

CHECK GMC PRICES Against the 3 Lowest!

GMC builds every type and size—capacities, ½ to 15 tons!

THE DIESEL engines used by GMC are full brothers of the mighty Diesels powering modern streamlined trains built by General Motors.

Our own YMAC Time Payment Plan assures you of lowest available rates

GMC TRUCKS TRAILERS - DIESELS

cause they are "trading with a friend", and for other similarly vague reasons.

Creating and maintaining that intangible thing, good will, are two important uses of letter-writing, Miss Noble says. However, she stresses the point that letters must be well written, and, preferably, by an experienced copywriter, rather than by just anyone around the office who can type "Dear Sir".

Even that letter asking for an appointment for your salesman should be written by this experienced copywriter, Miss Noble believes.

"A letter asking for an interview is your prospect's first glimpse of your company", and she explains, "here is your opportunity to be warm, friendly—to make the prospect *want* to see your representative."

Thank-you letters are among those which "need-not-be-written" type, but such letters often create the most good will, she points out. Her idea is that often we are inclined to take business routine for granted, to neglect the little things that people respond to, through carelessness or in the rush of business, and thus miss opportunities to call ourselves or our products to the customer's or prospect's attention, or just to hold their good will.

A THANK-YOU letter follows a salesman's call on a prospect. In this letter Miss Noble reviews briefly the sales points developed in the interview, thus giving her company a second chance to make an impression and to create good will. Whenever the deal is climaxed by a contract, the customer gets a thank-you letter and a pledge of service.

Another instance where a letter is used to maintain good will is when prices are raised. "In the petroleum industry", Miss Noble explains, "there is frequently fluctuation of price. Here, particularly in the case of an increase of price, is when a well-written letter should be sent to notify the customer and to maintain good will." Such a letter gives the company an even break, at least, to put the customer into a more receptive frame of mind toward the price increase.

A carefully prepared questionnaire is another form of letter-writing which gets quickly, cheaply and accurately, valuable information about a prospect's needs in petroleum products. This obviously furnishes good ammunition to company salesmen.

While the principles of advertising are applicable to any industry, yet writing sales letters for the petroleum industry is quite different from writing them for most any other business, Miss Noble has found. "It is a challenge", she says, "to the copywriter, to use . . . his imagination, ingenuity, persuasiveness and written salesmanship, to guide his prospect through the well-known stages of interest, desire, and action."

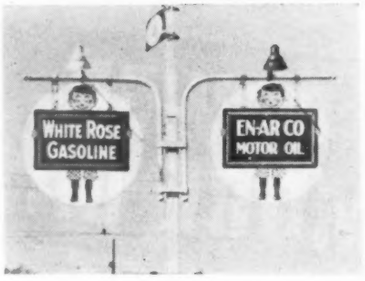
With products of most other lines, you can conjure up pictures of such tangible and readily understood qualities as material, taste, fragrance, feel, weight, size, appearance, and so on. Not so with oil, Miss Noble laments. Your letter cannot talk quality alone, but it must convince the prospect of the actual worth of the product in use, as to how economically it will operate his car or truck, what increase in efficiency will result, what the maximum power or service is, and so on, she points out.

Then your letter must be definitely "slanted" toward the class of trade you are trying to reach. Because oil is such a highly specialized industry, with so many different classes of trade, no one letter can sell all classes. Jobbers, dealers, retailers, commercial consumers, truck operators, garages and service stations all must have letters applicable to them specifically.

Miss Noble's advertising experience was gained with a well-known Boston advertising agency. Previous to that connection she worked for 12 years, beginning with her school vacations, on the "Christian Science Monitor."

The Lincoln Oil Co. is a large Independent gasoline oil jobber and fuel oil distributor in New England. It was organized in 1921, with one small plant and one truck for facilities. Today, the company has a modern office and a considerable office staff. It has two ocean terminals, a lube oil compounding plant, eight bulk distributing stations, over 30 trucks, around 50 service stations and an additional 220 retail outlets. It distributes Cities Service products. Louis I. Rosenfield is owner and manager. Frank F. Hennessy is general sales manager; and fuel oil manager is John T. Lordan.

National Refining Modernizes

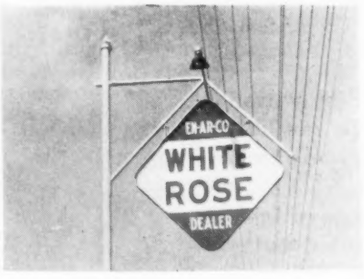


CLEVELAND — As part of its marketing modernization program, National Refining Co. has adopted a new color scheme—ivory and green, instead of the yellow-and-black long familiar at En-Ar-Co stations.

The boy-with-the-slate signs, whose witticisms have amused a generation of motorists, will be retained, although this identification will be dropped from the hanging signs. Pictured above is the oldtype of hanging sign, while below is the new square, ivory-and-green signs, hung at the corner.

The new colors, consisting of specially-blended shades of ivory and green, are being applied to all of National's stations, trucks, pumps and other facilities. The modernization program will cost in all approximately $250,000.

In addition, National also plans to build eight or ten stations—or rather rebuild at present locations, as no increase in outlets is contemplated.



Perfection Stove Wins Oil Heater Patent Suit

N. P. N. News Bureau

CLEVELAND—The U. S. Circuit Court of Appeals for the Sixth Circuit has upheld the decision of Federal District Judge Paul Jones that the Superfex oil heaters of the Perfection Stove Company do not infringe on Motor Wheel Corporation's Valjean patent No. 1512869.

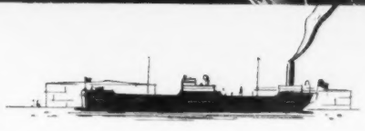
Suit was instituted by Motor Wheel in 1932. In November, 1935, a report of a Master in Chancery pointed out differences between the Perfection burner and that of the Valjean patent, but recommended that the claim of infringement be upheld.

Decision of District Judge Jones, however, sustained the Perfection Stove's claim of non-infringement, stating that elements of "earlier patents so confine the present patent as to free the defendant's Superfex heater from the charge of infringement." Perfection Stove has been marketing Superfex distillate and fuel oil heaters since 1930.

Following that decision, Motor Wheel appealed to the federal appellate court. Case was heard by Federal Judges Hicks, Simons and Hamilton. The decision affirming the decision of Judge Jones was unanimous.

The average new-car buyer comes into the market about every third year. Some recent estimates indicate that the average used-car buyer replaces his car about every 16 months.

INTERNATIONAL symbol of service



Ships that sail the seven seas come to General American Terminals. Here are world famed facilities that you can use—for extra safety in storage, extra speed in handling, extra savings. General American provides terminals for anything that flows through a pipe line. It's almost like having your own private terminal. You will save time and cut costs by using General American facilities.

"Strategically located to serve you"

GENERAL AMERICAN TANK STORAGE TERMINALS

A DIVISION OF GENERAL AMERICAN TRANSPORTATION CORPORATION

Goodhope, La. (Port of New Orleans)
Westwego, La. (Port of New Orleans)
Carteret, N. J. (Port of New York)
Galena Park, Tex. (Port of Houston)
Corpus Christi, Texas

The Accepted Standards of Pennsylvania Bright Stock Excellence Since 1900

•

ASTM POUR POINT
10 15 20 25

ASTM CONRADSON CARBON
.8 1.0 1.2 1.5

ASTM COLOR
3½ 4 5 6

•

Manufactured Solely by

THE CONEWANGO REFINING CO.

Warren, Pennsylvania, U. S. A.

Transcontinental Toll Highways Vetoed, New National Roads System Recommended

Effect of roadside control programs in restricting filling stations along future highways was discussed fully in NATIONAL PETROLEUM NEWS of March 15, 1939. Now comes President Roosevelt to indorse the Bureau of Public Roads' plan to acquire areas on each side of new highways and rent out space for concessions—such as filling stations—and, presumably, impose restrictions on the number and type of such structures.

N. P. N. News Bureau

WASHINGTON—Congress has received from the U. S. Bureau of Public Roads a 210-page report recommending against transcontinental toll superhighways, because "they won't pay out," and urging instead a new, master plan for developing all highway and street facilities of the nation.

Included in the Bureau's recommendation for a new national road system is the suggestion that the federal government permit use of federal-aid highway funds for acquisition of rights-of-way so that state authorities would have control over roadside development.

President Roosevelt, in transmitting the Bureau's report to Congress on April 27, strongly endorsed the principle of "excess-taking"—that is, the condemnation of a much wider area than is needed for highway purposes so that the government could rent out sites for roadside concessions—such as filling stations—and recover back some of the road-building costs.

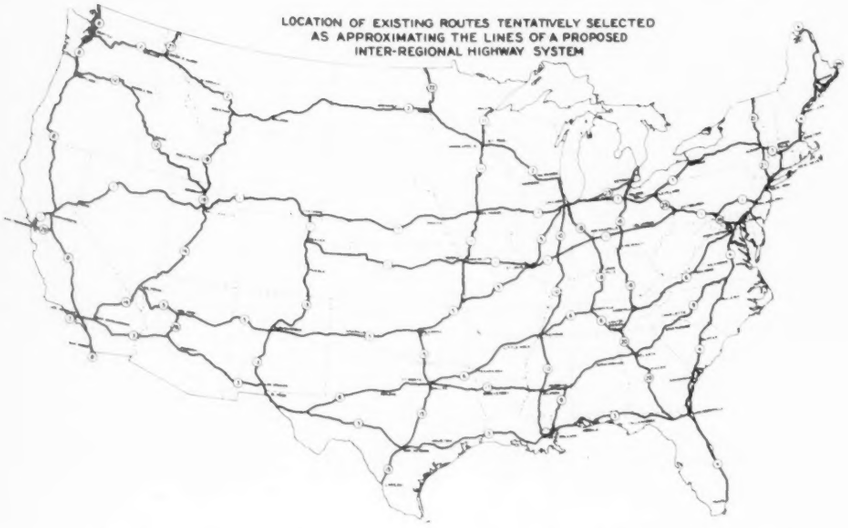
The Bureaus' report prefaced its recommendations about a new master highway system, as follows:

"The demonstrated improbability of a return from tolls sufficient to recover the costs of constructing and operating six transcontinental highways, such as were described in the Federal Aid Highway Act of 1938, results from the consequences of direct toll impositions. It does not follow that there is not sufficient traffic to warrant and require facilities of a higher standard than are provided at present. . . ."

Although no discussion is included as to how this new program is to be financed, observers here see it as indicative of probable increases in federal and state taxes on motorists—or, at best, no decreases from present levels.

The report is divided into two parts:

Proposed Inter-regional Highway System


LOCATION OF EXISTING ROUTES TENTATIVELY SELECTED
AS APPROXIMATING THE LINES OF A PROPOSED
INTER-REGIONAL HIGHWAY SYSTEM

The heavy lines show proposed routes for a system of inter-regional highways, totaling 26,700 miles, which would accommodate an estimated 12.5 per cent of the annual vehicle-mileage, according to Bureau of Public Roads recommendation to Congress

(1) The proposed system of six transcontinental superhighways, and (2) The master plan.

Primary conclusion reached by the lengthy discussion of the first part is that "a sound federal policy for the construction of a system of transcontinental superhighways, traversing the entire extent of the United States from east to west and from north to south, cannot rest upon the expectation that the costs of constructing and operating such a system as a whole would be recoverable, in their entirety or in any large part from direct tolls collected from the users. . . The factual evidence presented in this report clearly indicates that the construction of direct toll highways cannot be relied upon as a sound solution of the problem of providing adequate facilities for the vitally necessary highway transportation of the United States, or to solve any considerable part of this problem."

Approximate length of the six projected superhighways would be 14,336 miles, the Bureau found, and the estimated construction cost, $2,899,800,000, an average of $202,270 per mile.

"A most conservative average estimated annual expenditure," for the period 1945-1960, required for financing the construction, maintaining the property and operating the facility, for the system would be $184,054,000 a year, the Bureau estimates, which is at the average rate of $12,840 per mile per year.

On the other hand, BPR says the most "optimistic estimate" of utilization of the highways during the 1945-60 period is around 4,544,000,000 vehicle-miles per year of toll-paying traffic (3,635,000,000 for passenger cars and 909,000,000 for trucks and buses).

Such utilization would average approximately 12,450,000 vehicle miles per day, implying an average traffic volume on each mile per day of 699 passenger automobiles and 175 trucks and buses. On some stretches, of course, the traffic would be much less —as from Spokane, Wash., to North Dakota, where an average of 96 automobiles and 24 trucks and buses is estimated.

Assuming that rates as high as 3.5 cents per vehicle mile for trucks and buses were established, and 1 cent for passenger automobiles, the total toll that could be expected per year from the completed system by 1960 would be but $84,037,000, and for the 15-year period would average around $72,140,000 per year "which is considerably less than the $184,054,000 estimated as the probable average total annual cost. . . ." to quote from the report.

There are only two short sections in the United States where, by 1960, the probable "take" could be expected to approximate the annual cost. These are in the heavy-traffic of the northeast.

Several other short sections would approach the cost figure by 1960—a number in California; Washington-Baltimore pike; Miami to Jacksonville; Baltimore to Philadelphia, and several others.

The Bureau suggests, however, that if a test of the feasibility of such roads is desired by Congress over a limited mileage "upon which there is a reasonable prospect of the recovery of the costs through tolls, it is recommended that such provision be made applicable to a section of highway, properly located, and extending from an appropriate point near Washington, D. C. to an appropriate point near Boston, Mass."

Factors used by the Bureau in arriving at its estimates of potential use of such highways included facts gathered from the highway planning surveys now being made in nearly all states in co-operation with BPR. These surveys show that there is "no fully transcontinental travel, none even of semi-continental range, that could be accumulated in sufficient amount on any one or several highways . . . . either to justify the construction, or to any considerable extent determine the character or location of such a highway or highways."

FOR instance, it points out that the number of passenger cars daily bound from the three West Coast states to points in states bordering on or near the Atlantic coast is 300, and from the same states to points east of the Mississippi River "will be found to be less than 800 vehicles" daily. These vehicles, the Bureau says, "could not be attracted to a single east-west route under any circumstances," largely because of the diversity of origin and destination points.

The transcontinental travel of trucks and buses is proportionately much less, according to the report, which also quotes figures on north-south travel.

Probably even more important from the standpoint of determining potential use of such highways is the fact that more than half of the pleasure automobiles in the United States are owned by families with incomes of $1500 a year or less, less than 5 per cent are owned by families with incomes over $5000, and less than a third are owned by families with incomes over $2000.

Commenting on these figures, developed by the Bureau of Foreign and Domestic Commerce as a result of a recent study, the BPR says:

"In estimating the probable volume of toll-paying traffic on the selected superhighways, it is necessary to give due consideration to these facts. Persons of low income who own and operate automobiles are influenced in the uses they make of their cars to a greater extent by the immediate operating expense, such as gasoline and oil, than by the actual total costs, including tires, depreciation, etc. The

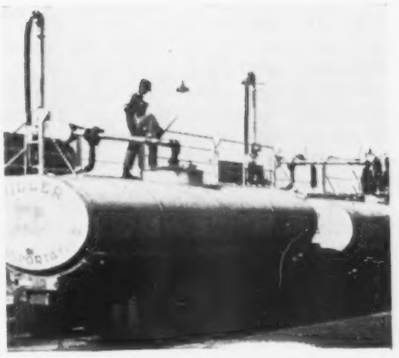


Photo above shows installation to provide for loading through the same arm from either side of the rack. Diagram below shows details of construction, using CHIKSAN Ball-Bearing Swing Joints.

SPEED UP LOADING OPERATIONS

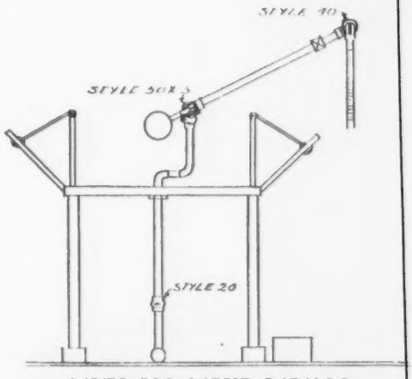
CHIKSAN *Ball-Bearing* Swing Joints speed up loading operations by permitting high loading pressures. They combine flexibility with safety . . . reduced fire hazards . . . and greater ease and economy of operation. Standardize on CHIKSAN and stop loading rack losses.

Style 50X Counterbalance Swing Joint

Style 20 Swing Joint

Style 40 Swing Joint

WITH THESE 3 CHIKSAN *BALL-BEARING* SWING JOINTS, IT'S EASY TO BUILD THE INSTALLATION SHOWN BELOW.



WRITE FOR LATEST CATALOG

CHIKSAN BALL BEARING SWING JOINTS

CHIKSAN OIL TOOL CO., LTD.

FULLERTON, CALIFORNIA

cost of gasoline consumed on a trip may amount to little more than a cent a mile. To the motor car owner with an income of less than $1500 a year, a toll of one-cent-a-mile is likely to appear as a 100 per cent increase in his cost of operation, and so viewed it is an additional cost that he is not likely to pay."

This motorist, who already pays gasoline tax, tire tax, and other motorist taxes which go for upkeep of the free highways, would be little likely to pay an additional toll, be it ever so low, for the few minutes he could save on a superhighway.

Which brings the reasoning of the Bureau to the point where it starts considering, in Part II of the report, the new "master system."

Summarizing this plan, the report says:

"The carrying out of the plan in all its parts calls for appropriate action by the Federal and State governments and all county and municipal divisions. As desirable joint contributions of the Federal and State governments, the report lists several undertakings as follows:

"1. Construction of a special, tentatively defined system of direct interregional highways, with all necessary connections through and around cities, designed to meet the requirements of national defense in time of war and the needs of a growing peace-time traffic of longer range.

"2. Modernization of the federal-aid highway system.

"3. Elimination of hazards at railroad grade crossings.

"4. An improvement of secondary and feeder roads, properly integrated with land-use program."

The report also includes a description of difficulties encountered in acquisition of adequate rights-of-way, and proposes a change in federal policy whereby the federal government will be able to assist in their purchase, which it does not do now.

First on the list of projects "worthy of consideration by congress" under the plan, the Bureau says, is the construction of trans-city arteries of traffic, since, in most cities, the streets now carrying the bulk of traffic coming in from highways are remnants of the pre-automobile age. In this connection, belt-lines around cities, and by-passes, also are deemed worthy projects.

Next in importance, according to the recommendations, are "direct interregional routes and modernized rural highways." These direct interregional routes need not be of the caliber of construction contemplated by superhighway enthusiasts, but should have adequate rights-of-way, not only for broader surfacing but for elimination of roadside "distractions" to the motorist.

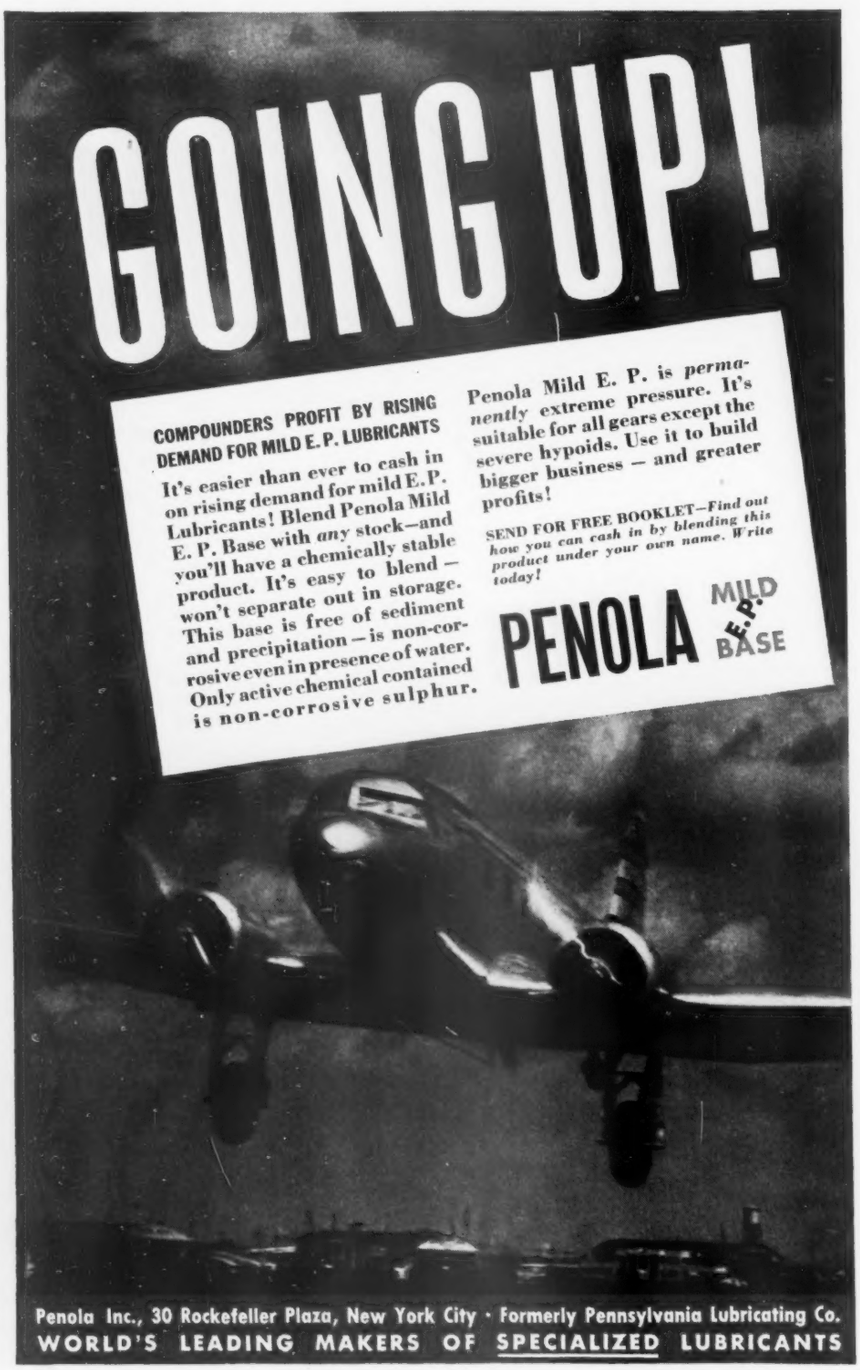
AT the time many of the "modern" roads were built, they used the old horse-and-buggy rights-of-way, and one reason for this is that when they were built "the automobile had not become the abundant revenue producer" it is today, and property taxes were relied on to pay the cost.

Many of the needed improvements to the roads can be accomplished locally, but the straightening out of some of the interregional routes will involve construction of considerable lengths of new and more direct highways."

To accomplish this, it is recommended that a new "primary highway system" be established by law, and the report outlines the scope of the proposed system. It would cover 26,700 miles, approximately twice the length of the proposed superhighways, and would "attract traffic and generate new activity, in contradistinction to the traffic repelling tendency of the proposed toll road system."

This system, while it would be less than one per cent of the total rural highway mileage in the country, would accommodate some 12.5 per cent of the vehicle-mileage. It is estimated the superhighways would handle but 1.2 per cent.

Likewise, the report recommends continuation of the improvement of secondary and feeder roads with the ends in view of improved service to a still larger percentage of total traffic,


GOING UP!
COMPOUNDERS PROFIT BY RISING DEMAND FOR MILD E.P. LUBRICANTS
It's easier than ever to cash in on rising demand for mild E.P. Lubricants! Blend Penola Mild E. P. Base with any stock—and you'll have a chemically stable product. It's easy to blend—won't separate out in storage. This base is free of sediment and precipitation—is non-corrosive even in presence of water. Only active chemical contained is non-corrosive sulphur.
Penola Mild E. P. is permanently extreme pressure. It's suitable for all gears except the severe hypoids. Use it to build bigger business — and greater profits!
SEND FOR FREE BOOKLET—Find out how you can cash in by blending this product under your own name. Write today!
PENOLA
MILD E.P. BASE
Penola Inc., 30 Rockefeller Plaza, New York City · Formerly Pennsylvania Lubricating Co.
WORLD'S LEADING MAKERS OF SPECIALIZED LUBRICANTS

and direct access to a greater percentage of rural homes and establishments.

The big recommendation, however, is the creation of the new primary system, and the participation by the federal government in acquisition of rights-of-way. The report says that states have never had at their disposal sufficient funds to meet the costs of right-of-way for a comprehensive modernization program, and "in consequence, the character of the improvements undertaken too often has been governed by the limited possibilities of land acquisition."

The new primary system would require enormous acquisitions of right-of-way, both for new construction and for broadening existing roads where they fit into the main system. For this purpose, the BPR would set up (or take unto itself the duties of) "some central agency with sufficient funds and authority of law to acquire the lands necessary for the improvement."

"Such agency," the recommendation continues, "should have authority, under proper restrictions, to make such lands available to state and local highway and street authorities for rights-of-way and for development of recreational, tourist, and other facilities for the accommodation of traffic, all on a basis which would render such agency either partly or wholly self-liquidating over a period of years."

Presumably, although it is given scant mention, such "liquidation" would come about as the result of rentals and repayment by the states and municipalities of the moneys spent for the lands—but the money would have to come from somewhere to get in the hands of the states for repayment, and that "somewhere" would doubtless be the motorist's pocket.

Spark Plug Firm Sets Price Under 44 States Fair Trade Laws

TOLEDO — Contracts specifying wholesale and retail prices of its products have been signed by Champion Spark Plug Co. in all states having fair trade laws which permit the manufacturer to stipulate prices for his trade-marked products, announces R. A. Stranahan, president of Champion. Forty-four states have fair trade laws; only Vermont, Texas, Missouri, Delaware and the District of Columbia have no such laws, he pointed out.

Decision to take advantage of this legislation, which was designed to protect trade-marked merchandise from price cutting and unfair competitive practices, Stranahan explained, followed a year's trial in California under the fair trade law of that state. He said that the trade had 100-per cent approved results under the California law.

The average age of all the passenger cars in use in the U. S. is estimated at a little over four and one-half years.

NO OIL LASTS LONGER . . .
and No Oil Affords Better Profit Opportunities!

ALLPEN

The *LOW laid-down cost* of this 100% Pure Bradford Pennsylvania Premium Oil . . . . bought direct from our new, modernized refinery . . . . is attracting many new distributors who recognize the unusual MONEY-MAKING possibilities. Write for details of exclusive franchise territory.

No Acid — No Varnish — No Sludge

Also
HIGH FLASH CYLINDER STOCKS
SOLVENT DEWAXED NEUTRAL & BRIGHT STOCKS
BLENDED MOTOR OILS
In Tank Cars — Drums and Cans
MAY WE QUOTE?

Bradford
OIL REFINING COMPANY

PRODUCERS, REFINERS
MARKETERS

100% PURE PENNSYLVANIA OIL

BRADFORD
PENNSYLVANIA
U. S. A.

LEARN ADVERTISING AT *Home*

EVERY man and woman in business should take this course. Why? Because it enables you to think intelligently and accurately on advertising problems. Advertising is an interesting study and prepares you to write more effective letters; to acquire a larger vocabulary; to comprehend the sales and merchandising problems of a business, and to be definitely in a position to recommend business development ideas.

Learning advertising at home is the most satisfactory way of acquiring the facts and fundamentals of this profession. Too often in a classroom students forget what the instructor said last week and last month. Talking about advertising problems won't help nearly as much as THINKING THEM THRU—and this can best be done in the quiet of your own home. The Vincent Edwards Course gives you the data on paper, which you have for lifetime reference.

Every step in advertising is worked out for you—it is easily the most authoritative—the most interesting—the most complete course available.

Executives and Junior Executives: free explanatory booklet will be mailed to you, if you apply on the letterhead of the company where you are employed.

VINCENT EDWARDS
ADVERTISING COURSE
342 Madison Ave. New York City

Heil Roto-Gear Pumps are easy to install and positive in operation

You enjoy lower operating and maintenance costs for trucks and bulk plant service with sturdy Heil Roto-Gear Pumps.

These outstanding Heil features assure you of dependable, long-time service: *rugged main-body casting* holds all moving parts in alignment . . . *two-piece pump* shaft with sliding-sleeve joint—eliminates thrust loads on gear faces . . . *"Four Port"* design for simplified, economical installation . . . and other Heil advantages assure savings in upkeep expense.

Get the whole story on these efficient pumps. Write today for free, colorful Heil Roto-Gear Pump bulletin.

THE HEIL CO.
Milwaukee, Wisconsin Hillside, New Jersey
Pumps—Valves—Transport Tanks—Dehydrators—Oil Burners—Water Systems—Bottle Washers—Hoists—Bodies—Road Scrapers

Markets

Mid-Continent

TULSA, May 1.—Gasoline quotations as reported by most Mid-Continent suppliers were unchanged the last week in April. One Oklahoma refiner and a North Texas supplier reported advancing their gasoline quotations 0.125 cent, while an East Texas refiner said he had reduced his quotation for 400 e.p. gasoline 0.125 cent. Four cars of Oklahoma 70-72 octane gasoline were reported sold in the open market to jobbers, three at 4.75 cents and one at 4.875 cents.

All sales of Grade 26-70 natural gasoline reported last week f.o.b. Group 3 and Breckenridge were at 2.5 cents.

Kerosine supplies were said to be in good balance. One Oklahoma refiner reported advancing his quotation for 41-43 0.125 cent to 4 cents.

California

LOS ANGELES, April 29.—Japanese refiners may enter tenders at an early date for substantial quantities of refinable California crude, according to reports here the past week. Lack of this inquiry in recent months has been a disturbing factor in the problem of balancing demand with supply.

Bids were also being prepared on the 8,000,000-barrel fuel oil requirements of the U. S. Navy over the coming year.

Domestic gasoline prices were reported unchanged. Some sales of diesel fuel were reported by independents at 90 cents a barrel, although most quotations ranged from 95 to $1.00, according to reports.

Pennsylvania

CLEVELAND, May 1.—Prices for western Pennsylvania refined products were reported unchanged by most refiners the last week in April. Two refiners said they had advanced their quotations for 25 pour test, 200 vis. neutral oil 0.5 cent to 17 cents, but aside from this no changes in quotations were indicated.

Shipments of lubricating oils against contracts were said to be in good volume.

Mid-Western

CHICAGO, May 1.—Open spot sales of 23 cars of gasoline were reported by Chicago tank car marketers and refiners last week. Ideal motoring weather resulted in brisk demand for shipments against contracts, resellers said.

A refiner reported advancing his quotation on 70-72 octane gasoline 0.125 cent to 5 cents. A tank car marketer who had been quoting 4.375 cents for this grade said he had advanced his price 0.125 cent to 4.5 cents. Supplies of regular-grade gasoline were said to be limited.

One refiner said he was oversold on kerosine, while some resellers reported demand for this product was lagging. Light fuels and specially blended tractor fuels have largely repaced kerosine for farm use, they said.

Eastern

NEW YORK, May 1.—No changes were reported in eastern seaboard gasoline prices the past week but suppliers were beginning to feel the effect of the strike of some employes on the tankers of four companies, according to reports here.

One distributor said he had been unable to obtain a barge load of gasoline at New York for upstate delivery and had been forced to borrow. Refineries along the seaboard were said to be operating at a fraction of capacity due to curtailed crude supplies. One refiner said he had had to ship gasoline coastwise, which had been intended for export, because of the reduced output of his seaboard plant.

Gulf

NEW YORK, May 1.—Continued scarcity of Grade C bunker oil, and sales and offerings at lower prices of gasoline made from Mexican crude featured the Gulf market the past week.

Two cargoes of 60 octane, 375 end point gasoline, made from Mexican crude, were reported sold for shipment to Portugal at 3.8135 cents; a third cargo was reported sold at 3.8 cents for shipment to a Scandinavian country. Refiner who reported the sales said he had three more cargoes which he was offering at 4 cents. However, this gasoline bears some restriction as to free shipment because it was made from Mexican crude, the legality of which has been questioned.

Grade C bunker oil was said to be virtually unobtainable at the Gulf. Those suppliers quoting this product said their prices were unchanged at 75 cents a barrel but that this price was largely nominal.

Wax

NEW YORK, May 1.—Seaboard wax prices were unchanged during the week ended April 29, according to reports of suppliers. Demand was holding up well and there was some scarcity of scale grades at New York, suppliers said.

N. P. N. Refinery Index

The Refinery Index shown below is the calculated average return from refining a barrel of 36 gravity Mid-Continent crude into its various principal products at the current price of crude oil. The index indicates the following margins in cents per barrel (42 gallons) between cost of crude and current selling price of products.

Date	Margin
May 1	47.5
Month ago	44.8
Year ago	41.1

N.P.N. Gasoline Index

	Dealer T.w. Cents per	Tank Car Gal.
May 1	9.38	5.58
Month ago	9.35	5.47
Year ago	10.21	5.91

Dealer index is an average of "undivided" dealer prices, ex-tax, in 50 cities.

Tank car index is a weighted average of 12 wholesale markets for regular-grade gasoline.

Fuel Oil

NEW YORK, May 1.—Advances of 0.125 cent in tank car and barge prices for kerosine and No. 2 fuel oil were reported by some New York harbor suppliers the past week, due, they said, to the increase in tanker rates from the Gulf. One refiner also reported advancing his price for No. 4 oil 0.125 cent.

An advance of 10 cents to $1.05 per barrel in his prices for No. 6 fuel oil and Bunker C for ships' bunkers at New York and Boston was announced by still another refiner. Supplies of these oils were said to be scarce.

* * *

CHICAGO, May 1.—Mild weather has brought jobber demand for light fuel oils to a standstill, according to reports of resellers here last week. A tank car marketer said he had reduced his quotation on No. 3 fuel 0.125 cent to 2.875 cents. Other quotations for this grade ranged up to 3.125 cents. Prices for other grades were reported unchanged.

Industrial fuel demand continued active with bulk of movement against contracts, resellers said. A refiner reported reducing his quotation for No. 6 oil 7.5 cents to $0.35 per barrel.

* * *

TULSA, May 1.—No changes in fuel oil quotations were reported by Mid-Continent suppliers last week. Only occasional shipping instructions for light fuels were reported placed, but some buyers called for rush shipment, refiners said. An Oklahoma refiner reported selling two cars of 14-16 fuel oil at 70 cents.

REFINERY TANK CAR MARKETS

All prices on this page are publisher's opinion of open market quotations or sales, for spot shipment (10 to 15 days) unless otherwise stated. Prices in cents per gallon, except heavy fuel oils in dollars per barrel of 42 gallons, wax and petrolatums in cents per pound in barrels, tank car lots, FOB refineries in districts designated, except where otherwise noted. Inter-refinery and export prices not included unless so stated in the respective markets. Federal, state or municipal taxes not included. Prices quoted apply on products made from legally produced crude. Unless otherwise noted, gasoline octane ratings are determined by C.F.R. Motor method, A.S.T.M. D-357-33T; and lubricating oil specifications determined according to A.S.T.M. methods, unless otherwise noted.

Gasoline

Prices Effective	May 1	April 24
OKLAHOMA		
U. S. Motor: (Octane L-3)		
62 oct. & below	4.00 – 4.25	4.00 – 4.25
63-66 oct.	4.25 – 4.375	4.25 – 4.375
67-69 oct.	4.50 – 4.75	4.50 – 4.75
70-72 oct.	4.75 – 5.00	4.75 – 5.00
60-62, 400 e.p.	(h) 4.00 –4.125	(h) 4.00
WESTERN PENNA. REFINERY QUOTATIONS		
Bradford-Warren:		
Motor gasoline:		
U. S. Motor:		
Min. 65 oct.	6.00 – 6.75	6.00 – 6.75
Min. 70 oct.	(h) 6.50	(h) 6.50
"Q" gasoline	(h) 6.50	(h) 6.50
Other districts:		
Motor gasoline:		
U. S. Motor (58-62° gravity):	4.50 – 5.00	4.50 – 5.00
"Q" gasoline	6.25 – 6.50	6.25 – 6.50
CENTRAL MICHIGAN (a)		
Str.-Run Gasoline	(c) 4.25 –4.50	(c) 4.00 – 4.50
U. S. Motor: (Octane L-3)		
67-69 octane	(e) 6.50	(e) 6.50
70-72 octane	7.25	7.25

Prices Effective	May 1	April 24
CALIFORNIA (3c tax to be added if used in state)		
U. S. Motor:		
54-58 gravity, for in-state shipment	7.25 – 9.25	7.25 – 9.25
54-58 gravity, for out-side state shipment	7.25 – 9.00	7.00 – 9.00
58-61 gravity, 375-400 e.p., 65 oct. & above	8.25 – 9.75	8.25 – 9.75
N. TEX. (b)		
U. S. Motor: (Octane L-3)		
62 oct. & below	4.00 – 4.375	4.00 – 4.375
63-66 oct.	4.50 – 4.625	4.50 – 4.625
67-69 oct.	4.50 – 4.875	4.50 – 4.875
70-72 oct.	4.75 – 5.25	4.75 – 5.25
60-62, 400 e.p.	(h) 4.00	(h) 4.00
KANSAS (For Kansas destinations only)		
U. S. Motor: (Octane L-3)		
62 oct. & below	4.25 – 5.00	4.25 – 5.00
67-69 octane	4.50 – 5.50	4.50 – 5.50
70-72 octane	5.00 – 5.875	5.00 – 5.875
W. TEX. (b)		
U. S. Motor, (Octane L-3)		
62 oct. & below	(h) 4.00 –4.375	(h) 4.00 –4.375
63-66 oct.	(e) 4.50 –4.75	(e) 4.50 – 4.75
67-69 oct.	(h) 4.50 –5.00	(h) 4.50 – 5.00
70-72 oct.	(h) 5.00 –5.50	(h) 5.00 – 5.50

Prices Effective	May 1	April 24
CENTRAL WEST TEXAS (Prices to truck transports)		
U. S. Motor Gasoline: (Octane L-3)		
62 oct. & below	(h) 4.00	(h) 3.875–4.00
63-66 octane	(e) 4.625	(e) 4.625
66-70 octane	(e) 5.25	(e) 5.25
E. TEX.		
U. S. Motor Gasoline, (Octane L-3)		
70-72 oct.	(h) 4.50 –4.75	(h) 4.50 –4.75
60-62, 400 e.p.	(h) 4.25	(h) 4.25 –4.375
N. LA. (For shipment to La. & Ark.)		
U. S. Motor: (Octane L-3)		
62 oct. & below	(h) 4.125–4.375	(h) 4.125–4.375
63-66 oct.	(e) 4.375–4.625	(e) 4.375–4.625
67-69 oct.	(e) 4.625–4.875	(e) 4.625–4.875
70-72 oct.	(e) 4.875–5.375	(e) 4.875–5.375
ARKANSAS (F.o.b. Ark. plant of one refiner, for shipment to Ark. & La.)		
U. S. Motor: (Octane L-3)		
62 octane & below	4.25	4.25
67-69 oct.	4.75	4.75
OHIO (S. O. Ohio quotations for statewide delivery and subject to exceptions for local price disturbances)		
U. S. Motor	7.50	7.60
Above 65 oct.	7.75	7.75

(Continued on next page)

(a) Prices FOB Central Michigan refinery group basis, for shipment within Mich. Shipments may originate at plants outside Central group. (b) For shipment to Texas and New Mexico destinations; Group 3 prices quoted for northern shipment. (c) Excluding Detroit shipment. (e) One refiner quoting. (f) Two suppliers quoting. (g) To resellers holding licenses. (h) Two refiners quoting. (i) No quotations reported.

MID-WESTERN TANK CAR MARKET

Prices in this Midwestern Tank Car Market table are gathered from refiners and tank car marketers or brokers from their offices located in Chicago and the surrounding territory. While the prices are quoted on a Group 3 (Oklahoma) freight rate basis, this is in accordance with the custom of the oil industry which uses Group 3 as a price basis for the ease of comparing prices even when the material originates in another refining district. Generally when prices are quoted in this Chicago market, the origin of the material is not known at the time the quotation is given, oftentimes even with the quoting refiners who have refineries in more than one refining district. All other gasoline prices are given by and for the particular refining district where the material is made and from which it is shipped.

Gasoline

Prices Effective	May 1	April 24
U. S. Motor: (Octane L-3)		
62 oct. and below	3.75 – 4.25	3.75 – 4.25
63-66 oct.	4.00 – 4.375	4.00 – 4.375
67-69 oct.	4.125– 4.625	4.125– 4.625
70-72 oct.	4.50 – 5.00	4.375– 5.00

Kerosine

41-43 gravity, w.w.	3.50 – 4.125	3.50 – 4.125
42-44 gravity, w.w.	3.625– 4.375	3.625– 4.375

Fuel and Gas Oils

Prices Effective	May 1	April 24
No. 1 p.w.	3.25 – 3.875	3.25 – 3.875
No. 1 straw	3.25 – 3.50	3.25 – 3.50
No. 2 straw	3.125– 3.50	3.125– 3.50
No. 3	2.875– 3.125	3.00 – 3.25
No. 5	$0.575–$0.70	$0.575–$0.70

Prices Effective	May 1	April 24
No. 6	$0.35 –$0.45	$0.35 –$0.45
U. G. I. gas oil	2.625– 3.00	2.625– 3.00
Range oil	3.375– 4.00	3.375– 4.00

Naphtha and Solvent

Stoddard solvent	5.875	5.875
Cleaners' naphtha	6.375	6.375
V. M. & P. naphtha	6.375	6.375
Mineral spirits	5.375	5.375
Rubber solvent	6.375	6.375
Lacquer diluent	7.375	7.375

Daily range of gasoline prices as reported in PLATT'S OILGRAM (Week Ended April 28, 1939)

U. S. Motor, (Octane Number determined according to L-3 Method in Okla., Texas and Mid-Western Districts):	April 24	April 25	April 26	April 27	April 28
62 octane and below:					
Oklahoma	4.00 – 4.25	4.00 – 4.25	4.00 – 4.25	4.00 – 4.25	4.00 – 4.25
(a) North Texas	4.00 – 4.375	4.00 – 4.375	4.00 – 4.375	4.00 – 4.375	4.00 – 4.375
West Texas	(d) 4.00 –4.375	(d) 4.00 –4.375	(d) 4.00 –4.375	(d) 4.00 –4.375	(d) 4.00 –4.375
Mid-Western (Group 3 basis)	3.75 – 4.25	3.875– 4.25	3.75 – 4.25	3.75 – 4.25	3.75 – 4.25
63-66 octane:					
Oklahoma	4.25 – 4.375	4.25 – 4.375	4.25 – 4.375	4.25 – 4.375	4.25 – 4.375
(a) North Texas	4.50 – 4.625	4.50 – 4.625	4.50 – 4.625	4.50 – 4.625	4.50 – 4.625
West Texas	(b) 4.50 –4.75	(b) 4.50 –4.75	(b) 4.50 –4.75	(b) 4.50 –4.75	(b) 4.50 –4.75
Mid-Western (Group 3 basis)	4.00 – 4.375	4.00 – 4.375	4.00 – 4.375	4.00 – 4.375	4.00 – 4.375
67-69 octane:					
Oklahoma	4.50 – 4.75	4.50 – 4.75	4.50 – 4.75	4.50 – 4.75	4.50 – 4.75
(a) North Texas	4.50 – 4.875	4.50 – 4.875	4.50 – 4.875	4.50 – 4.875	4.50 – 4.875
West Texas	(d) 4.50 –5.00	(d) 4.50 –5.00	(d) 4.50 –5.00	(d) 4.50 –5.00	(d) 4.50 –5.00
Mid-Western (Group 3 basis)	4.125– 4.625	4.125– 4.625	4.125– 4.625	4.125– 4.625	4.125– 4.625
70-72 octane:					
Oklahoma	4.75 – 5.00	4.75 – 5.00	4.75 – 5.00	4.75 – 5.00	4.75 – 5.00
(a) North Texas	4.75 – 5.25	4.75 – 5.25	4.75 – 5.25	4.75 – 5.25	4.75 – 5.25
West Texas	(d) 5.00 –5.50	(d) 5.00 –5.50	(d) 5.00 –5.50	(d) 5.00 –5.50	(d) 5.00 –5.50
East Texas	(d) 4.50 –4.75	(d) 4.50 –4.75	(d) 4.50 –4.75	(d) 4.50 –4.75	(d) 4.50 –4.75
Mid-Western (Group 3 basis)	4.375– 5.00	4.50 – 5.00	4.50 – 5.00	4.50 – 5.00	4.50 – 5.00
Motor Gasoline, 60-64 octane:					
New York harbor	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25
Philadelphia district	5.75 – 6.25	5.75 – 6.25	5.75 – 6.25	5.75 – 6.25	5.75 – 6.25
Baltimore district	5.75 – 6.00	5.75 – 6.00	5.75 – 6.00	5.75 – 6.00	5.75 – 6.00
Motor Gasoline, 65 octane & above:					
New York harbor	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25
Philadelphia district	5.75 – 6.25	5.75 – 6.25	5.75 – 6.25	5.75 – 6.25	5.75 – 6.25
Baltimore district	5.75 – 6.00	5.75 – 6.00	5.75 – 6.00	5.75 – 6.00	5.75 – 6.00
U. S. Motor, 58-62°:					
Other districts (Western Penna.)	4.50 – 5.00	4.50 – 5.00	4.50 – 5.00	4.50 – 5.00	4.50 – 5.00
Motor Gasoline, Min. 65 octane:					
Bradford-Warren (Western Penna.)	6.00 – 6.75	6.00 – 6.75	6.00 – 6.75	6.00 – 6.75	6.00 – 6.75
Motor Gasoline, Min. 70 octane:					
Bradford-Warren (Western Penna.)	(d) 6.50	(d) 6.50	(d) 6.50	(d) 6.50	(d) 6.50
"Q" Gasoline:					
Bradford-Warren (Western Penna.)	(d) 6.50	(d) 6.50	(d) 6.50	(d) 6.50	(d) 6.50
Other Districts (Western Penna.)	6.25 – 6.50	6.25 – 6.50	6.25 – 6.50	6.25 – 6.50	6.25 – 6.50

(a) For shipment to Texas and New Mexico destinations: Group 3 prices are quoted on northern shipment. (b) One refiner quoting. (c) To resellers holding licenses. (d) Two refiners quoting.

REFINERY TANK CAR MARKETS

All prices on this page are publisher's opinion of open market quotations or sales, for spot shipment (10 to 15 days). Prices in cents per gallon except heavy fuel oils in dollars per barrel of 42 gallons, tank car lots, FOB refineries in districts designated, except where otherwise noted. Inter-refinery and export prices not included, unless so stated in the respective markets. Federal, state or municipal taxes not included. Prices quoted apply on products made from legally produced crude. Unless otherwise noted, gasoline octane ratings are determined by C.F.R. Motor method, A.S.T.M. D-357-33T; and lubricating oil specifications determined according to A.S.T.M. methods, unless otherwise noted.

Natural Gasoline

(Prices to blenders on freight basis shown below. Shipments may originate in any Mid-Continent manufacturing district.)

Prices Effective	May 1	April 24
FOB GROUP 3		
Grade 26-70	(m)2.50	(m)2.50
FOB BRECKENRIDGE		
Grade 26-70	(l)2.50	(m)2.50
CALIFORNIA (F.o.b. plants in Los Angeles basin)		
75-85, 350-375 e.p. for blending	6.25 – 6.75	6.25 – 6.75

Kerosine

WESTERN PENNA. REFINERY QUOTATIONS

Bradford-Warren:		
45 gravity w.w.	5.00	5.00
46 gravity w.w.	(e) 5.375–5.50	(e) 5.375–5.50
Other districts:		
45 gravity w.w.	5.00 – 5.25	5.00 – 5.25
46 gravity w.w.	(h)5.125	(h)5.125
47 gravity w.w.	5.25 – 5.50	5.25 – 5.50
CENTRAL MICHIGAN (a)		
47-49 gravity w.w.	5.00 – 5.25	5.00 – 5.25
OKLAHOMA		
41-43 gravity w.w.	3.875– 4.25	3.875– 4.25
42-44 gravity w.w.	4.00 – 4.625	4.00 – 4.625
KANSAS (For Kansas destinations only)		
41-43 gravity w.w.	(e)4.25	(e)4.25
42-44 gravity w.w.	4.375– 4.50	4.375– 4.50
N. TEX. (b)		
41-43 gravity w.w.	4.25 – 4.50	4.25 – 4.50
N. LA. (For shipment to La. and Ark.)		
41-43 gravity w.w.	(h) 4.00 –4.125	(h) 4.00 –4.125
ARK. (F.o.b. Ark. plant of one refiner for shipment to Ark. and La.)		
41-43 gravity w.w.	4.25	4.25
CALIFORNIA		
40-43 gravity w.w.	5.00 – 7.00	5.00 – 7.00

Gas *and* Fuel Oils

WESTERN PENNA. REFINERY QUOTATIONS

Bradford-Warren:		
36-40 gravity	(e)4.625	(e)4.625
Other districts: (Excluding Pittsburgh District Prices)		
36-40 gravity	4.25	4.25
CENTRAL MICHIGAN (a)		
P.W. Distillate	4.50 – 4.75	4.50 – 4.75
No. 3 gas oil, Str.	4.00 – 4.25	4.00 – 4.25
U.G.I. gas oil	3.75 – 4.00	3.75 – 4.00
Fuel Oils (Vis. at 100):		
500-700 Vis.	2.00 – 2.375	2.00 – 2.375
300-500 Vis.	2.25 – 2.50	2.25 – 2.50
100-300 Vis.	2.375– 3.00	2.375– 3.00
OKLAHOMA		
No. 1 prime white	3.50 – 4.00	3.50 – 4.00
No. 1 straw	(h) 3.375–3.625	(h) 3.375–3.625
No. 2 straw	3.25 – 3.625	3.25 – 3.625
No. 2 dark	(h) 3.125–3.25	(h) 3.125–3.25
U.G.I. gas oil	(h) 3.25 –3.375	(h)3.25 –3.375
28-30 gravity fuel oil	(e)3.25	(e)3.25
28-30 gravity zero fuel	2.75 – 3.25	2.75 – 3.25
24-26 gravity fuel	(e) $0.85–$0.90	(e) $0.85–$0.90
14-16 gravity fuel	(e)$0.70	(e)$0.70
No. 6 fuel	(h) $0.35–$0.45	(h) $0.35–$0.45
Range oil	(h)3.625	(h)3.625
KANSAS (For Kans. destinations only).		
No. 1 p.w. fuel oil	3.625– 4.00	3.625– 4.00
10-14 gravity fuel oil	$0.45 –$0.80	$0.45 –$0.80
N. TEX. (b)		
No. 1 Prime white	(e)4.00	(e)4.00
N. LA. (For shipment to La. and Ark.)		
20-24 gravity fuel	(e) $1.00–$1.05	(e) $1.00–$1.05
16-20 gravity fuel	(e) $0.80–$0.85	(e) $0.80–$0.85
10-14 gravity fuel	(e) $0.70–$0.75	(e) $0.70–$0.75
ARK. (F.o.b. Ark. plant of one refiner, for shipment to Ark. and La.)		
No. 2 fuel	3.375	3.375
28-30 gravity gas oil, zero	3.125	3.125
Tractor Fuel	(j)4.50	(j)4.25

Prices Effective	May 1	April 24
CALIFORNIA		
San Joaquin Valley:		
Heavy fuel	$0.50 –$0.75	$0.50 –$0.75
Light fuel	$0.70 –$0.85	$0.70 –$0.85
Diesel fuel (per gal.)	2.75 – 4.00	2.75 – 4.00
Stove dist. (per gal.)	3.25 – 5.00	3.25 – 5.00
Los Angeles:		
Heavy fuel	$0.50 –$0.90	$0.50 –$0.90
Light fuel	$0.60 –$1.00	$0.60 –$1.00
Diesel fuel (per gal.)	2.125– 4.00	2.125– 4.00
Stove dist. (per gal.)	2.375– 5.00	2.375– 5.00
San Francisco:		
Heavy fuel	$0.95	$0.95
Light fuel	$1.05	$1.05
Diesel fuel (per gal.)	4.50	4.50
Stove dist. (per gal.)	5.50	5.50

Note: All above heavy fuels meet Pacific specification 400; light fuel, spec. 300; Diesel fuels, spec. 200; and stove distillate, spec. 100.

Neutral Oils

WESTERN PENNA. REFINERY QUOTATIONS

Viscous Neutrals No. 3 col. (Viscosity at 70° F.) 200 Vis. (180 at 100°) 420-425 fl.		
0 p.t.	(e)19.50	(e)19.50
10 p.t.	(e)18.50	(e)18.50
15 p.t.	(e)18.00	(e)18.00
25 p.t.	16.50 –17.00	16.50 –17.00
150 Vis. (143 at 100) 400-405 fl.		
0 p.t.	(e)18.50	(e)18.50
10 p.t.	(e)17.50	(e)17.50
15 p.t.	(e)16.50	(e)16.50
25 p.t.	14.50 –15.50	14.50 –15.50
SOUTH TEXAS		
Vis. Color		
Pale Oils: (*Vis. at 100°F.*)		
100 No. 1½-2½	4.50 – 5.00	4.50 – 5.00
200 No. 2-3	6.00 – 6.25	6.00 – 6.25
300 No. 2-3	6.50 – 6.75	6.50 – 6.75
500 No. 2½-3½	7.50 – 7.75	7.50 – 7.75
750 No. 3-4	8.00 – 8.25	8.00 – 8.25
1200 No. 3-4	8.375– 8.75	8.375– 8.75
2000 No. 4	8.50 – 9.25	8.50 – 9.25
Red Oils:		
200 No. 5-6	6.00 – 6.25	6.00 – 6.25
300 No. 5-6	6.50 – 6.75	6.50 – 6.75
500 No. 5-6	7.50 – 7.75	7.50 – 7.75
750 No. 5-6	8.00 – 8.25	8.00 – 8.25
1200 No. 5-6	8.375– 8.75	8.375– 8.75
2000 No. 5-6	8.50 – 9.25	8.50 – 9.25

Note: Red oil prices cover oils with green cast; blue cast red oils are slightly lower in some cases.

MID-CONTINENT (Vis. at 100° F.; F.o.b. Tulsa basis).

Pale Oils: (0 to 10 P.P.)		
Vis. Color		
60-85—No. 2	5.50	5.50
86-110—No. 2	6.00	6.00
150—No. 3	9.00	9.00
180—No. 3	9.50 –10.00	9.50 –10.00
200—No. 3	10.00 –10.50	10.00 –10.50
250—No. 3	11.00 –11.50	11.00 –11.50
280—No. 3	12.50	12.50
300—No. 3	13.00	13.00
Red Oils:		
180—No. 5	(e)9.00	(e)9.00
200—No. 5	9.00 –10.00	9.00 –10.00
280—No. 5	11.50 –11.75	11.50 –11.75
300—No. 5	(h)12.00	(h)12.00

Note: The following oils, of 15 to 25 p.p., are generally quoted these amounts under 0-10 p.p.; viscous oils, 0.5c; non-viscous, 0.25c. Viscous oils (150-300 vis.), No. 4 color, generally are quoted 0.5c above No. 5 color oils.

CHICAGO (Vis. at 100° F.)

Pale Oils 0 to 10 p.p.		
Vis. Color		
60-85—No. 2	7.25	7.25
86-110—No. 2	7.75	7.75
150—No. 3	9.00	9.00
180—No. 3	10.00	10.00
200—No. 3	10.50	10.50
250—No. 3	11.50	11.50

Prices Effective	May 1	April 24
CHICAGO (Continued)		
Red Oils:		
180—No. 5	9.00	9.00
200—No. 5	9.50	9.50
250—No. 5	10.50	10.50
280—No. 5	11.50	11.50
300—No. 5	11.75	11.75

Note: Viscous oils, 15 to 30 p.p. are quoted 0.5c lower; 60-85 and 86-110 No. 2 non-viscous oils, 15 to 30 p.p., 0.25c lower. To obtain delivered prices in Chicago, add 0.25c per gal.

Cylinder Stocks

MID-CONTINENT (F.o.b. Tulsa basis)

Bright Stocks:		
190-200 Vis. at 210° D.	(e)19.00	(e)19.00
150-160 Vis. at 210°D:		
0 to 10 p.p.	14.25 –16.00	14.25 –16.00
10 to 25 p.p.	13.50 –15.00	13.50 –15.00
25 to 40 p.p.	(h) 13.25–13.50	(h) 13.25–13.50
150-160 vis. at 210° E.	12.50 –14.50	12.50 –14.50
120 Vis. at 210° D		
0 to 10 p.p.	(h) 13.75–14.50	(h) 13.75–14.50
25 to 40 p.p.	(e)12.75	(e)12.75
600 S.R. Dark Green	(e)5.50	(e)5.50
600 S.R. Olive Green	(h) 7.00 –7.50	(h) 7.00 –7.50
631 S.R.	(e)12.50	(e)12.50
Black Oil	3.50 – 4.00	3.50 – 4.00

CHICAGO (Viscosity at 210°)

Unfiltered Steam Refined:		
140	9.00	9.00
160	10.00	10.00
200	11.00	11.00
Bright stocks, 160 vis. at 210. No. 8 color:		
0 to 10 p.p.	15.75	15.75
15 to 25 p.p.	14.75	14.75
30 to 40 p.p.	14.25	14.25
E filtered Cyl. Stock	13.50	13.50

Note: To obtain prices delivered in Chicago, add 0.25c per gal.

WESTERN PENNA. REFINERY QUOTATIONS

600 S.R. filterable	8.00 –10.00	8.00 –10.00
650 S.R.	10.00 –11.50	10.00 –11.50
600 fl	10.50 –12.00	10.50 –12.00
630 fl	13.00 –14.00	13.00 –14.00
Bright stock, 145-155 vis. at 210°, 540-550 flash, No. 8 color:		
10 p.t.	18.50 –19.00	18.50 –19.00
15 p.t.	17.50 –18.00	17.50 –18.00
25 p.t.	15.50 –16.00	15.50 –16.00

Petrolatums

WESTERN PENNA. (In bbls., carloads; in tank cars, 0.5c per lb. less. One refiner reports he equalizes freight with nearest refinery to destination)

Snow White	5.875– 6.125	5.875– 6.125
Lily White	4.875– 5.125	4.875– 5.125
Cream White	3.875– 4.125	3.875– 4.125
Light Amber	2.50	2.50
Amber	2.25	2.25
Red	(e)2.125	(e)2.125

Wax

WESTERN PENNA. REFINERY QUOTATIONS

In bbls., carloads, New York.

122-124 A.m.p., w.c. scale	(f)	(f)
124-126 A.m.p., w.c. scale	2.80 – 2.85	2.80 – 2.85

OKLAHOMA (In bbls. or burlap bags, carloads)

124-126 A.m.p., w.c. scale	(h)3.00	(h)3.00

CHICAGO (In bags, carload lots. Melting points are E.M.P. (A.S.T.M.) methods; add 3° F. to convert into A.m.p.)

Fully refined:		
122-124	4.25	4.25
125-127	(i)4.35	(i)4.35
127-129	(i)4.70	(i)4.70
130-132	(i)5.00	(i)5.00
132-134	(i)5.25	(i)5.25
135-137	(i)6.00	(i)6.00

(a) Prices FOB Central Michigan refinery group basis, for shipment within Mich. Shipments may originate at plants outside Central group. (b) For shipment to Texas and New Mexico destinations: Group 3 prices quoted on northern shipments. (c) Excluding Detroit shipment. (e) One refiner quoting. (f) No quotations reported. (g) To resellers holding licenses. (h) Two refiners quoting. (i) Same prices quoted in bags or slabs loose. (j) For shipment to Ark. points only. (k) Two suppliers quoting. (l) Quotations. (m) Sales

TANK WAGON MARKETS

Tank car, tank wagon, dealer, and service station prices for gasoline **do not include taxes;** *they do, however, include inspection fees as shown in general footnote. Gasoline taxes, shown in separate column, include* 1c *federal, and state taxes; also city and county taxes as indicated in footnotes. Kerosine tank wagon prices also do not include taxes; kerosine taxes, where levied, are indicated in footnotes. Dealer discounts are shown in footnotes; for commercial consumer discounts, see NPN for March* 29, *April* 12, *and April* 19, 1939, *or write to NPN. These prices in effect May* 1, 1939, *as posted by principal marketing companies at their headquarters offices, but subject to later correction.*

S. O. New Jersey

Essolene
(*Regular Grade*)

	Consumer Tank Car	Dealer T.W.	Gasoline Taxes	Kerosine T.W.
*Atlantic City, N. J.	6.9	8.7	4	7
*Newark, N. J.	6.9	8.7	4	7
Annapolis, Md.	7.85	9.35	5	8
Baltimore, Md.	7.25	8.75	5	8
Cumberland, Md.	8.65	11.15	5	10
Washington, D. C.	7.5	9	3	9.5
Danville, Va.	8.45	10.95	6	12.9
Norfolk, Va.	7.25	9.75	6	11.5
Petersburg, Va.	7.55	10.05	6	11.7
Richmond, Va.	7.55	10.05	6	8.7
Roanoke, Va.	8.75	11.25	6	11
Charleston, W. Va.	8.05	10.55	6	12.6
Parkersburg, W. Va.	7.35	9.35	6	11.2
Wheeling, W. Va.	8.35	10.25	6	12.2
Charlotte, N. C.	8.65	11.15	7	12.1
Hickory, N. C.	9.15	11.65	7	12.5
Mt. Airy, N. C.	8.95	11.45	7	12.3
Raleigh, N. C.	8.25	10.75	7	11.6
Salisbury, N. C.	8.75	11.25	7	12.2
Charleston, S. C.	7.25	9.75	7	10.6
Columbia, S. C	8.25	10.75	7	11.6
Spartanburg, S. C.	8.95	11.45	7	12.4

Discount to undivided dealers: thru territory, except New Jersey points, which see in "Note" below: Dealer t.w. price less 0.5c per gal.

*Effective Dec. 1, 1938, S. O. New Jersey posted a minimum retail resale price of 11.2c thru New Jersey, except Trenton area and Cumberland county.

Note: While the above posted prices continue at Atlantic City and Newark, N. J., dealers will pay a net price of 8.2c per gal. for Essolene. Dealers having pumps marked only Esso, Essolene and "Standard" White gasoline will pay 7.7c per gal. for Esolene.

Kerosine Discount: 1c off t.w. price or 25 gals., or more, under contract thru territory (Baltimore City contract not necessary) except no discount in state of New Jersey.

Socony-Vacuum Oil Co., Inc.

(S. O. New York Division)

	Socony Mobilgas (*Regular Grade*) Consumer Tank Car	"Split" Dealer T.W.	Gasoline Taxes	Kerosine T.W.
Metropolitan N. Y. City: Boroughs of Manhattan, Bronx and Brooklyn (Kings and Queens)	6.6	8.3	*5	6.75
Borough of Richmond (Staten Is.)	6.6	8.5	*5	6.75
Albany, N. Y.	6.5	8.5	5	7
Binghamton, N. Y.	7.5	9.5	5	8
Buffalo, N. Y.	7	6.8	5	7
Jamestown, N. Y.	6.75	7.9	5	7.5
Plattsburg, N. Y.	7	9.3	5	7.5
Rochester, N. Y.	7.25	7.75	5	7.75
Syracuse, N. Y.	7	9	5	7.25
Danbury, Conn.	7.25	9.3	4	7.75
Hartford, Conn.	6.75	8.8	4	6.50
New Haven, Conn.	6.75	8.5	4	6
Bangor, Me.	6.75	9	5	7.25
Portland, Me.	6.5	8.5	5	7
Boston, Mass.	6.5	8	4	6.75
Concord, N. H.	7.2	9.5	5	7.75
Lancaster, N. H.	8	10.5	5	8.75
Manchester, N. H.	7.1	9.1	5	7.5
Providence, R. I.	6.5	8.3	4	6.75
Burlington, Vt.	7	8.5	5	7.5
Rutland, Vt.	7.3	9	5	7.75

*Plus 2% city sales tax computed at time of each sale.

Discount to undivided dealers: 0.5c less than "split" dealer t.w.

Atlantic Refining

Atlantic White Flash Gasoline
(*Regular Grade*)

	Commercial Tank Car	Dealer T.W.	Gasoline Taxes	Kerosine T.W.
Philadelphia Pa.	7	8.5	5	10
Pittsburgh	8	8.5	5	10.5
Allentown	7.5	9	5	10.5
Erie	8	9	5	10
Scranton	7.5	9	5	10.5
Altoona	8	8.5	5	10.5
Harrisburg	7.5	9	5	10.5
Williamsport	7.5	9	5	10.5
Dover, Del.	...	9	5	10.5
Wilmington	...	8.5	5	9.75
Boston, Mass.	...	8	4	6.25
Springfield, Mass.	...	8.8	4	7
Worcester, Mass.	...	8.8	4	7
Fall River, Mass.	...	8.5	4	7
Hartford, Conn.	...	8.8	4	6.5
New Haven, Conn.	...	8.5	4	7
Providence, R. I.	...	8.3	4	6.5
Atlantic City, N. J.	...	8.2	4	7
Camden, N. J.	...	8.1	4	7
Trenton, N. J.	...	8.2	4	7
Annapolis, Md.	...	9.35	5	9.5
Baltimore, Md.	...	8.75	5	8
Hagerstown, Md.	...	9.85	5	10
Richmond, Va.	...	10.05	6	10.7
Wilmington, N. C.	...	9.85	7	10.8
Brunswick, Ga.	...	8.5	7	*10.5
Jacksonville, Fla.	...	8.5	8	10

*Georgia has kerosine tax of 1c per gal., not included in above price.

Discount to undivided dealers: Dealer t.w. less 0.5c per gal. except in Georgia and Florida, dealer t.w. and undivided dealer price is same.

S. O. Ohio

Sohio X-70 Gasoline
(Regular Grade)

	Consumer T.W.	†Divided Dlr.	Gasoline Taxes	Kerosine T.W.
Ohio Statewide	11	10	5	*12
Akron	10	8	5	*8.5
Cincinnati	11	9	5	*12
Cleveland	11	10	5	*12
Columbus	10	8.5	5	*12
Dayton	10	8.5	5	*12
Marietta	10	8.5	5	*12
Portsmouth	11	10	5	*12
Toledo	10	7.5	5	*12
Youngstown	10	8.5	5	*11.5

Renown Gasoline
(Third Grade)

Ohio Statewide	10.5	9.5	5	....
Akron	10	8	5	....
Cincinnati	11	9	5	....
Cleveland	10.5	9.5	5	....
Columbus	9.5	8	5	....
Dayton	10	8.5	5	....
Marietta	10	8.5	5	....
Portsmouth	10.5	9.5	5	....
Toledo	9.5	7	5	....
Youngstown	10	8.5	5	....

Note: Prices at other Ohio points may be obtained by writing NPN.

*Ohio has kerosine tax of 1c per gal., not included in above prices.

†This price also to authorized agents, exclusive of 0.5c rental.

Discount to undivided dealers: 0.5c less than divided dealer t.w.

Sales tax: Ohio's 3% sales tax, effective Jan. 27, 1935, is added "where assessable, to regular posted prices", S. O. Ohio says.

S. O. Kentucky

Crown Gasoline
(*Regular Grade*)

	Consumer T.W.	Net Dlr.	Gasoline Taxes	Kerosine T.W
Covington, Ky.	11.5	8.5	6	9.5
Lexington, Ky.	13	10	6	10
Louisville, Ky.	11.5	8.5	6	9
Paducah, Ky.	12	9	6	9
Jackson, Miss.	10.5	7.5	7	*9
Vicksburg, Miss.	12	9	7	*8.5
Birmingham, Ala.	10.5	7.5	*8	8.5
Mobile, Ala.	12	9	*9	8.5
Montgomery, Ala.	12	10	*9	*9.5
Atlanta, Ga.	11.5	8.5	7	*7.5
Augusta, Ga.	12.5	9.5	7	*8
Macon, Ga.	11	8	7	*9
Savannah, Ga.	11.5	8.5	7	*7
Jacksonville, Fla.	11.5	8.5	8	8
Miami, Fla.	11.5	8.5	8	8
Pensacola, Fla.	11.5	8.5	*9	8
Tampa, Fla.	11.5	8.5	8	8

Kyso Gasoline
(*Third Grade*)

Covington, Ky.	10	7.5	6	....
Lexington, Ky.	11.5	9	6	....
Louisville, Ky.	10	7.5	6	....
Paducah, Ky.	10	7.5	6	....
Jackson, Miss.	8.5	6	7	....
Vicksburg, Miss.	10	7.5	7	....
Birmingham, Ala.	9	6.5	*8	....
Mobile, Ala.	9.5	7	*9	....
Montgomery, Ala.	11	8.5	*9	....
Atlanta, Ga.	10	7.5	7	....
Augusta, Ga.	11	8.5	7	....
Macon, Ga.	9.5	7	7	....
Savannah, Ga.	9.5	7	7	....
Jacksonville, Fla.	10	7.5	8	....
Miami, Fla.	10	7.5	8	....
Pensacola, Fla.	10	7.5	*9	....
Tampa, Fla.	10	7.5	8	....

Discounts to all tank wagon consumers: Effective* Jan. 4, 1937, thru territory, on Crown gasoline, 3c per gal. below consumer t.w. price; on Kyso, 2.5c below, regardless of quantity purchased, per month

**Taxes*: In the tax column is included these city and county gasoline taxes at the following points: Mobile, 2c city; Birmingham, 1c city; Montgomery, 1c city and 1c county; Pensacola, 1c city. Georgia and Montgomery, Ala. have kerosine taxes of 1c per gal., and Misaissippi 0.5c, not included in above prices.

S. O. Indiana

Red Crown (*Regular Grade*)
Stanolind (*Third Grade*)

	Red Crown Cons. T.W.	Dealer Prices Red Crown	Dealer Prices Stanolind	Gasoline Taxes	Kerosine T.W.
Chicago, Ill.	11.1	8.1	6.4	4	10
Decatur, Ill.	11.1	8.6	6.7	4	10
Joliet, Ill.	11.1	8.6	8.4	4	10
Peoria, Ill.	11.1	9.1	8.5	4	10
Quincy, Ill.	10.9	8.9	5.8	4	8.7
Indianapolis, Ind.	11.8	10.3	8.9	5	*10
Evansville, Ind.	11.6	10.1	7	5	*10.5
South Bend, Ind.	12.1	10.6	9.2	5	*9
Detroit, Mich.	9.1	7.6	7.1	4	7.1
Grand Rapids, Mich.	10	8.5	8	4	9.7
Saginaw, Mich.	11.8	9.1	8.1	4	9.3
Green Bay, Wis.	11.9	10	7.8	5	10.3
Milwaukee, Wis.	9.9	8.4	7.3	5	10.2
La Crosse, Wis.	11.5	10	9.5	5	10.4
Minneapolis-St. Paul	11.5	10	9	5	10.4
Duluth, Minn.	11.9	10.4	9.4	5	10.8
Mankato, Minn.	11.5	10	9.5	5	9.4
Des Moines, Ia.	10.9	9.4	8	4	*9.8
Davenport, Ia.	11.1	9.6	9.1	4	*10
Mason City, Ia.	11.3	9.8	9.1	4	*10.2
St. Louis, Mo.	10.2	8.7	7.5	*4	8
Kansas City, Mo.	10.4	8.4	6.9	*4	8
St. Joseph, Mo.	10.4	8	6.9	*4	8.4
Fargo, N. D.	12.7	11.2	10.7	4	11.6
Huron, S. D.	12	10.5	10	5	10.9
Wichita, Kans.	9.9	7.1	6.5	4	7.4

*Taxes: in the tax column is included these city and state gasoline taxes at following points: Kansas City, St. Joseph and St. Louis, 1c city tax. Kerosine taxes: Indiana has 4c, Iowa 3c per gal. state tax, not included in above prices.

S. O. Nebraska

Standard Red Crown Gasoline
(*Regular Grade*)

	T.W.	Dealer	Gasoline Taxes	Kerosine T.W.
Omaha, Neb.	11.5	9	6	10.3
McCook	11.5	9.5	6	10
Norfolk	11.9	8.9	6	10.7
North Platte	12.3	9.9	6	11.1
Scottsbluff	11	8.9	6	11

S. O. Louisiana

Essolene
(*Regular Grade*)

	Consumer Tank Car	Dealer T.W.	Gasoline Taxes	Kerosine T.W.
Little Rock, Ark.	7.25	9.75	7.5	10
Alexandria, La.	6.75	9.25	8	*11.5
Baton Rouge, La.	6.75	9.25	8	*9.5
New Orleans, La.	6.75	9.25	*10	*9
Lake Charles, La.	6.75	9.25	8	*11.5
Shreveport, La.	5.5	8	8	*10
Lafayette, La.	7	9.5	8	*9
Bristol, Tenn.	10.25	8.5	8	13
Chattanooga, Tenn.	9.5	11	8	14
Knoxville, Tenn.	10	12.5	8	14.5
Memphis, Tenn.	8	10.5	8	12.5
Nashville, Tenn.	9	9.5	8	12

*Taxes: New Orleans gasoline tax includes 7c state, 1c federal, and 2c parish tax. Louisiana has kerosine tax of 1c per gal.; in addition New Orleans has 1c parish tax, none of which are included in above prices.

Price basis to dealers: Undivided dealers get dealer price, less 0.5c.

Above prices include these inspection fees on both gasoline and kerosine unless otherwise specified, per gallon, figured on basis of 50 gallons per barrel:
Alabama, 1/40c on gasoline, 1/2c on kerosine; Arkansas, 1/5c per gal. in a single barrel, 1/20c per gal. in bulk; Florida 1/8c; Illinois, 3/100c; Indiana, 1/5c per gal. in lots up to 25 bbls.; 2/25c per gal. in lots of 25 bbls. or more; Kansas, 1/50c, (3/50c can be charged to meet inspection department expenses); Louisiana, 1/32c; Minnesota, 1/25c; Missouri, 3/100c; Nebraska, 3/100c; Nevada, gasoline, 1/20c; North Carolina, 1/4c; North Dakota, 1/20c; Oklahoma, 2/25c per gal. lots of more than 50 in bbls., 1/5c in lots less than 50 bbls.; South Carolina, 1/8c; South Dakota, 1/10c; Tennessee, 2/5c; and Wisconsin, 3/100c.
Kerosine inspection fee only: Iowa, 3/50c; Michigan, 1/5c per gal.

TANK WAGON MARKETS

Tank car, tank wagon, dealer, and service station prices for gasoline **do not include taxes;** *they do, however, include inspection fees as shown in general footnote. Gasoline taxes, shown in separate column, include 1c federal, and state taxes; also city and county taxes as indicated in footnotes. Kerosine tank wagon prices also do not include taxes; kerosine taxes where levied, are indicated in footnotes. Dealer discounts are shown in footnotes; for commercial consumer discounts, see NPN for March 29, April 12, and April 19, 1939, or write to NPN. These prices in effect May 1, 1939, as posted by principal marketing companies at their headquarters offices, but subject to later correction.*

Humble Oil & Refining Co.

Humble Motor Fuel
(*Regular Grade*)

	*T.W.	S.S.	Gasoline Taxes	Kerosine T.W.
Dallas, Tex	8	12	5	8
Ft. Worth, Tex	8	12	5	7
Houston, Tex	8	12	5	8
San Antonio, Tex	9	13	5	8

U. S. Motor Gasoline
(*Third Grade*)

Dallas, Tex	6.5	9	5
Ft. Worth, Texas	6.5	9	5
Houston, Tex	6.5	..	5
San Antonio, Tex	6.5	..	5

Thriftane
(Leaded, 67 Octane, Purple Gasoline)

Houston	7	10	5
San Antonio	8	11	5

*These tank wagon prices apply to all classes of dealers and consumers.

Continental Oil

Conoco Bronze (*Regular Grade*)
Demand (*Third Grade*)

	—Dealer Prices— Conoco Bronz-z-z	De-mand	Gasoline Taxes	Kerosine ‡T.W.
Denver, Colo	10.5	9.5	5	11.5
Grand Junc., Colo	13	12	5	15
Pueblo, Colo	9	8	5	10.5
Casper, Wyo	12	11	5	11.5
Cheyenne, Wyo	10	9	5	13
Billings, Mont	12	10	6	13
Butte, Mont	13.5	10.5	6	15.5
Great Falls, Mont	12	10	6	15.5
Helena, Mont	13	11	6	15.5
Salt Lake City, Utah	12	11	5	16
Boise, Ida	**14.1	**13.1	6	18
Twin Falls, Ida	**14.6	**13.6	6	18
Albuquerque, N. M	10	8	†6.5	10
Roswell, N. M	8.5	7.5	†6.5	8
Santa Fe, N. M	10	9	*7	10.5
Muskogee, Okla	7.5	6.5	5	7
Oklahoma City, Okla	6	5	5	6.5
Tulsa, Okla	7	6	5	7
Ft. Smith, Ark	9	6.5	5	7.5
Little Rock, Ark	9.25	8	7.5	8
Texarkana, Ark	8	6.5	5	8

†Includes city tax of 0.5c.
*Includes 1c city tax.
‡Prices are in t.w. deliveries to consumers and dealers.
**Prices include 0.1c to cover 1-mill tax for toll bridges.

S. O. California

Standard Gasoline
(*Regular Grade*)

	T.W.	S.S.	Gasoline Taxes	Kerosine T.W.
San Francisco, Cal	13.5	14.5	4	11.5
Los Angeles, Cal	13	14	4	10
Fresno Cal	14.5	15.5	4	12.5
Phoenix, Ariz	15.5	16.5	6	*12.5
Reno, Nev	15.5	16.5	5	13.5
Portland, Ore	14	15	6	13.5
Seattle, Wash	14	15	6	13.5
Spokane, Wash	16	17	6	16.5
Tacoma, Wash	14	15	6	13.5

Flight Gasoline
(*Third Grade*)

San Francisco, Cal	12	13	4	....
Los Angeles, Cal	11.5	12.5	4	....
Fresno, Cal	13	14	4	....
Reno, Nev	14	15	5	....
Phoenix, Ariz	11	12	6	....
Portland, Ore	12.5	13.5	6	....
Seattle, Wash	12.5	13.5	6	....
Spokane, Wash	14.5	15.5	6	....
Tacoma, Wash	12.5	13.5	6	....

*Arizona has kerosine tax of 5c per gal., not included in above prices.

Discount to 100% dealers, thru territory, off posted t.w. prices, on gasolines: on Standard Ethyl, Standard Gasoline and Stanavo Aviation, 3c per gal.; on Flight gasoline, 2c.

Canada

PRICES OF IMPERIAL OIL LTD.
Per Imperial Gallon, which is 1.2 U. S. Gallons

3-Star Imperial Gasoline
(*Regular Grade*)

	T.W.	Gasoline Taxes	Kerosine T.W.
Hamilton, Ont	15	8	15.5
Toronto, Ont	15	8	15.5
Brandon, Man	21	7	22
Winnipeg, Man	19.5	7	20.5
Regina, Sask	19	7	21
Saskatoon, Sask	21.3	7	23.3
Edmonton, Alta	19.5	7	21.5
Calgary, Alta	16.5	7	18.5
Vancouver, B. C	16	7	23
Montreal, Que	14	8	14.5
St. John, N. B	13.5	10	17.5
Halifax, N. S	13.5	10	17.5

Discounts to undivided dealers, 1c off t.w. price, except Maritime Provinces where undivided dealers pay t.w. price. Divided dealers pay t.w. price, thru territory.

Aviation Gasoline

Following are tank car, tank wagon or dealer prices, as indicated, of aviation gasoline in several marketing territories.

S. O. OHIO
Thru Ohio
Esso Aviation

	Consumer T.W.	Gasoline Taxes
74 octane	15.5	5
80 octane	16.5	5
87 octane	17.5	5

Discounts: For delivery on contract to hangar operators and resellers: 2c below consumer posted t.w. price, shown above.

S. O. INDIANA
Stanavo Ethyl Aviation Gasoline
73 Octane Number

Chicago, Ill	14.9	
Detroit, Mich	16.5	4
Milwaukee, Wis	15.1	5
Minneapolis, Minn	15.3	5
St. Louis, Mo	14.5	3
Kansas City, Mo	14.2	*4
Fargo, N. D	16.5	4
Huron, S. D	15.8	5

*Includes 1c city tax.

HUMBLE OIL & REFINING CO.
Aviation Gasoline

	Tank Car
Baytown, Tex	8.5

CONTINENTAL OIL CO.
Conoco Special Gasoline

	Dealer Price	Gasoline Taxes
Denver, Colo	14.5	5
Cheyenne, Wyo	15	5
Helena, Mont	22	6
Salt Lake City, Utah	17.5	5
Albuquerque, N. M	14	*6.5

*Includes city tax of 0.5c.

S. O. CALIFORNIA
Stanavo Aviation Gasoline

	T.W.	
Phoenix, Ariz	17.5	6
Los Angeles, Cal	15	4
San Francisco, Cal	15.5	4
Reno, Nev	17.5	5
Portland, Ore	16	6
Seattle, Wash	16	6
Spokane, Wash	19	6

Note: For discounts, etc., see note under Standard and Flight gasoline above.

Naphtha (In Tank Wagon)

S. O. NEW JERSEY
Posted Tank Wagon Prices

	Mineral Spirits	V.M.&P.
Newark, N. J	11.5	15.5
Baltimore, Md	15.5	....
Washington, D. C	15	....

Discounts: Buyers taking following quantities at one time, get these discounts: Newark, 2c per gal. on 200 gals. or more; less than 200 gals., 0.5c higher price. Baltimore 2c off on 25 to 100 gals. and 3c on over 100 gals. Washington, 2c off to contract buyers.

SOCONY-VACUUM OIL CO.

Buffalo, N. Y	10.5	12
*New York City	9.5	10.5
Rochester, N. Y	12	12
Syracuse, N. Y	12	14.5
Boston, Mass	11	11
Bridgeport, Conn	11	11.5
Hartford, Conn	10.5	11
Providence, R. I	11	12

*Prices apply to consumers only in quantities over 1,000 gals. annually. For quantities under 1,000 gals. annually, add 0.5c per gal.

ATLANTIC REFINING CO.

Philadelphia, Pa	11.5	12.5
Lancaster, Pa	13	14
Pittsburgh, Pa	12.5	14.5

Note: Prices for Mineral Spirits also apply to Stoddard Solvent; and prices for V.M.&P. Naphtha apply also to Light Cleaners Naphtha.

S. O. OHIO

	S.R. Solvent	V.M.&P. Naphtha
Thru Ohio	12.5	13.5

Note: V.M.&P. Naphtha prices also apply on Dry Cleaners naphtha and special Varnolene; Varnolene and Sohio Solvent 0.5c below these prices. Discounts to contract consumers off t.w. price; 300 to 999 gals., 0.5c; 1,000 to 2,499 gals., 0.75c; 2,500 to 4,999 gals., 1c; 5,000 or more gals., 1.5c.

S. O. INDIANA
(*Prices include state and federal taxes*)

	Oleum Spirits	V.M.&P. Naphtha	Stanisol
Chicago, Ill	16.2	16.5	15.9
Detroit, Mich	19.2	18.2	19.7
Kansas City, Mo	13.9	14.9	14.4
St. Louis, Mo	14.2	15.2	12.9
Milwaukee, Wis	18.8	19.8	19.3
Minneapolis, Minn	19	20	17.7

Note: All prices, with exception of Missouri points, include state tax. Prices shown are base prices, before discounts.

Naphtha (In Tank Cars)

In Tank Cars (F. o. b. refinery or seaboard terminal except Ohio, delivered price.)

	V.M.&P. Naphtha	Solvent
Baltimore	10.5	9.5
New York Harbor	10	9
Philadelphia district	10.5	9
Boston	10.5	9.5
Providence	10.5	9.5
†Ohio points, delivered	8.5	*8

*This is on rubber solvent.
†In Ohio, prices on D.C. naphtha and special Varnolene are same as V.M.&P.; on Varnolene and Sohio Solvent, prices are 0.125c less than on V.M.&P.

Price Changes

Dates and amounts of changes. See table for full current prices.

Socony-Vacuum Oil—Socony Mobilgas:
Metropolitan New York City: Boroughs of Manhattan, Bronx, and Brooklyn, consumer t. c. up 0.1c, split dealer t. w. up 0.4c, April 27; and Borough of Richmond consumer t. c. and split dealer up 0.1c, April 27.
Jamestown consumer t. c. cut 0.5c, April 22.
Bangor split dealer t. w. up 1.2c, April 25.

Atlantic Refining—Atlantic White Flash:
Brunswick dealer t. w. up 0.5c, April 28.
Jacksonville dealer t. w. up 0.5c, April 24.

Kerosine:
Fall River t. w. cut 1c, April 21.
Providence t. w. cut 0.5c. April 20.

S. O. Kentucky—Crown and Kyso Gasolines:
Paducah cut 0.5c, March 29.
Savannah up 1c, April 24.
T. w. and dealer prices up 1c, thru Florida, April 20.
Birmingham Crown cut 1.5c, Kyso cut 1c, April 19.

Continental Oil—Conoco Bronz-z-z and Demand:
Tulsa up 1c, April 25.
Ft. Smith up 0.75c, April 26.

Kerosine:
Tulsa t. w. up 0.5c, April 25.

S. O. California—Flight Gasoline:
Phoenix cut 1c, April 25.

Imperial Oil, Canada—Gasoline Tax:
Up 2c, in Quebec, April 18.

TRADEMARKS

The following are trademark applications pertinent to our field pending in the United States Patent Office which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade-Mark Company, Munsey Building, Washington, D. C., trademark specialists.

As an additional service feature to its readers, this journal gladly offers to them an advance search free of charge on any mark they may contemplate adopting or registering. You may communicate with the Editor of this Department, or send your inquiry direct to the National Trade-Mark Company, stating that you are a reader of this journal.

BOTOLENE. Ser. No. 413,757. Harvey W. Bedford, doing business as Bedford & Sons, Los Angeles, Calif. Filed Dec. 12, 1938.

BOTOLUBE. Ser. No. 413,758. Harvey W. Bedford, doing business as Bedford & Sons, Los Angeles. Filed Dec. 12, 1938.

For motor oil in bottles of quart sizes.

VISUALOIL. Ser. No. 413,759. Harvey W. Bedford, doing business as Bedford & Sons, Los Angeles. Filed Dec. 12, 1938.

For motor oil in bottles of quart sizes.

POWER KING, HI-TEST and picture of an aeroplane. Ser. No. 413,490. Staten Island Home Utilities, Inc., Port Richmond and Staten Island, N. Y. Filed Dec. 5, 1938.

For gasoline.

OIL-EYE. Ser. No. 413,529. The Zip Abrasive Company, Cleveland, O. Filed Dec. 6, 1938.

For liquid level gauges.

SKELGAS and design. Ser. No. 413,569. Skelgas Company, Kansas City, Mo. Filed Dec. 7, 1938.

For liquefied petroleum gas, compressed gas, compressed natural gas, liquefied propane, liquefied butane, and liquefied ethane.

SOLVENOIL. Ser. No. 372,136. The Lubri-Zol Corporation, Cleveland and Wickliffe, O. Filed Nov. 30, 1935.

For lubricating oils.

POLANE. Ser. No. 410,608. Patent Fuels & Color Corp., Cincinnati, O. Filed Sept. 15, 1938.

For chemical addition agents for fuels and lubricating oils for internal combustion engines.

INJECTOROL. Ser. No. 415,168. The Lubri-Zol Corp., Wickliffe, O. Filed Jan. 24, 1939.

For lubricating oils and greases, lubricating oil compounds and motor-lubricating oils.

CLEAVOL. Ser. No. 416,069. Lubrx Products, Inc., Boston, Mass. Filed Feb. 15, 1939.

For lubricating oil.

* * *

GRAPHLUBE. Ser. No. 402,898. Continental Oil Company, Ponca City, Okla. Filed Feb. 10, 1938.

For lubricating grease.

VIKOSPRA. Ser. No. 402,902. Continental Oil Company, Ponca City, Okla. Filed Feb. 10, 1938.

For lubricating oil.

SEALCO on design. Ser. No. 414,925. Sealco By-Products Company, Inc. Bluefield, W. Va. Filed Jan. 17, 1939.

For gasket paste used as a lubricant.

* * *

"MARITIME" and picture of an anchor. Ser. No. 412,002. Maritime Oil Co., Houston, Tex. Filed Oct. 24, 1938.

For gasoline, diesel fuel oils, lubricating oils, kerosine, and lubricating greases.

"SWAN PENN." Ser. No. 416,393. Swan-Finch Oil Corp., New York City. Filed Feb. 24, 1939.

For lubricating oils and greases.

* * *

HAMMAN EXTRA GOOD GASOLINE, on hexagon. Ser. No. 415,948. Hamman Exploration Company, Houston, Texas. Filed Feb. 11, 1939.

For Gasoline, Fuel and Lubricating.

GASOLINE, white on black rectangle, under figure of gorilla holding automobile aloft. Ser. No. 409,113 Staten Island Home Utilities, Inc. Port Richmond and Staten Island, N. Y. Filed July 30, 1938.

For gasoline.

PARAMOUNT. Ser. No. 415,682. W. H. Barber Company, Minneapolis, Minn. Filed Feb. 4, 1939.

For gasoline, kerosine, fuel oil, lubricating oils, and greases.

Drive Organized to Push Sales Of 'Gas' Made from Illinois Crude

SPRINGFIELD, Ill., May 1.—The Petroleum Ass'n. of Illinois in its effort to encourage additional outlets for Illinois crude oil has recently announced through its secretary Frank T. Egan, distribution of windshield stickers carrying the association emblem and the words—"I Want Gasoline Made From Illinois Crude Oil."

Distribution of the stickers will be by direct mail to members and nonmembers of the association and through filling stations selling products made from Illinois crude oil.

Newspaper, magazine and radio publicity also will be given the association's campaign for "wider markets for Illinois oil," it was said.

The three-fold purpose of the association is (1)—to encourage and foster production, marketing and refining of Illinois oil; (2)—to promote the use of products made from Illinois petroleum and (3)—to aid in protecting the right of the people of Illinois to realize their full and equitable share in the benefits of oil developments within the state.

Wisconsin Bans Trading Stamps

MADISON — Gov. Julius P. Heil has signed Senate Bill 126 which prohibits the giving of trading stamps, premiums or tokens with all nationally-advertised merchandise, including gasoline, motor oil and accessories.

TANK WAGON MARKETS, HEATING OILS

Prices in Effect May 1, 1939

Following are posted tank wagon prices of various grades of heating oil at the points shown in various territories. Prices are in cents per gallon.

	No. 1	No. 2	No. 4
S. O. NEW JERSEY			
Atlantic City, N. J.	7.0	5.75	5.75
Newark	7.0	5.75	5.75
Annapolis, Md.	....	6.5	....
Baltimore	6.75	6.25	5.75
Washington, D. C.	7.00	6.50	6.50
Norfolk, Va.	7.0	6.0	6.0
Petersburg	7.25	6.25	....
Richmond	7.25	6.25	6.25
Charlotte, N. C.	8.75	7.75	....
Hickory	....	8.25	....
Raleigh	8.75	7.25	....
Charleston, S. C.	8.5	7.0	....
Columbia	9.5	8.0	....
Spartanburg	10.2	8.7	....

SOCONY-VACUUM OIL CO. INC.
(S. O. New York Division)

	No. 2	No. 3	No. 4
New York City	5.75	5.75	5.75
Albany, N. Y.	5.75	5.75	5.25
Rochester, N. Y.	6.75	6.75	6.75
Boston, Mass.	5.50	5.50	5.50
Bangor, Me.	6.00	6.00	6.00
Manchester, N. H.	6.00	6.00	6.00
Burlington, Vt.	6.50	6.50	6.50
Hartford, Conn.	6.00	6.00	6.00
New Haven, Conn.	5.50	5.50	5.50
Providence, R. I.	5.50	5.50	5.50

Note: Prices for No. 1 fuel in Socony-Vacuum territory same as for kerosine which see in tank wagon table for various cities; prices change with kerosine.

ATLANTIC REFINING

	Numbers 1	2	3	4	5	6
Phila., Pa.	7.75	6.0	6.0	6.0	3.25	2.50
Allntn., Pa.	8.5	6.5	6.5	6.5	....	....
Wlmgtn., Del.	7.75	5.5	5.5	5.5	....	....
Sprngfld., Ms.	7.0	6.0	....	....	....	....
Wrcstr., Ms.	7.0	5.50	....	5.50	....	....
Hrtfd., Conn.	6.5	6.0	....	6.0	....	....

S. O. OHIO

	No. 1	No. 2	No. 3
Columbus Division and Cleveland	7.50	7.50	7.00
City of Lima	8.00	8.00	7.00
Rest of Ohio	8.00	8.00	7.50

Note: S. O. Ohio prices are for full compartment hose dumps, bucket dumps are 0.5c per gallon higher.

S. O. INDIANA
Stanolex Fuel and Furnace Oils

	No. Fuel	Stanolex Furnace
Chicago	(a)6.75	6.75
Indianapolis	...	(b)7.8
Detroit	...	7.1
Milwaukee	8.4	7.7
Minneapolis	7.8	7.8
St. Louis	7.7	(c)6.7
Kansas City	6.8	6.8

(a) For 400 gals. and over; 150 to 399 gals., 7.25c; 1 to 149 gals., 8.25c.

(b) Excluding 4c state tax.

(c) For 400 gals. & over; 100 to 399 gals., 7c; 1 to 99 gals., 8c.

Note: Small-lot deliveries of light fuel oils range up to 2c higher than above quotations.

Group 3 Freight Rates

To Division Headquarters Points of Standard Oil Co. of Indiana

	Gasoline-Kerosine Cents per Cwt.	Gasoline-Kerosine Cents per gal. 6.6 lbs.	Distillate-Gas Oil-Fuel Oil Cents per Cwt.	Distillate-Gas Oil-Fuel Oil Cents per gal. 7.4 lbs.
Chicago, Ill.	40	2.640	32	2.368
Decatur, Ill.	39	2.574	31	2.294
Joliet, Ill.	40	2.640	32	2.368
Peoria, Ill.	39	2.574	31	2.294
Quincy, Ill.	36	2.376	29	2.146
Indianapolis, Ind.	48	3.168	39	2.886
Evansville, Ind.	46	3.036	37	2.738
South Bend, Ind.	53	3.498	42	3.108
Detroit, Mich.	64	4.224	51	3.774
Gd. Rapids, Mich.	62	4.092	50	3.700
Saginaw, Mich.	66	4.356	53	3.922
Green Bay, Wis.	51	3.366	41	3.034
Milwaukee, Wis.	43	2.838	34.5	2.553
LaCrosse, Wis.	46	3.036	37	2.738
Min'ap'is-St. Paul	46	3.036	37	2.738
Duluth, Minn.	52	3.432	41.5	3.071
Mankato, Minn.	46	3.036	37	2.738
Des Moines, Ia.	36	2.376	29	2.146
Davenport, Ia.	39	2.574	31	2.294
Mason City, Ia.	42	2.772	33.5	2.479
St. Louis, Mo.	33	2.178	26.5	1.961
Kansas City, Mo.	28	1.848	22.5	1.665
St. Joseph, Mo.	28	1.848	22.5	1.665
Fargo, N. D.	63	4.158	50.5	3.737
Minot, N. D.	83	5.478	66.5	4.921
Huron, S. D.	53	3.498	42.5	3.145
From Ponca City	13	*0.858	13	†0.858
Wichita				
From Tulsa	21	*1.386	21	†1.386
From Cushing	19	*1.254	19	†1.254

*This rate also includes distillate rate at 6.6 lbs. per gal.

†This rate is exclusive of distillate which is based on 6.6 lbs. per gal. from Ponca City, Tulsa and Cushing, Okla., to Wichita. Includes only gas oil and fuel oil.

NOTE: There is no Group 3 rate to Wichita, Kans.

SEABOARD MARKETS, EXPORT AND COASTWISE

All prices on this page are publisher's opinion of open market quotations or sales, for spot shipment (10 to 15 days). In cargo markets, spot shipment is 90 days. Prices in cents per gallon, except heavy fuel oil in dollars per barrel, in tank car lots, f.o.b. refineries or seaboard terminals in districts designated, unless otherwise noted. Federal, state or municipal taxes not included. Prices quoted apply on products made from legally produced crude. Unless otherwise noted, gasoline octane ratings are determined by C.F.R. Motor method, A.S.T.M. D-357-337; and lubricating oil specifications determined according to A.S.T.M. methods, unless otherwise noted.

Eastern Domestic

(Inter-refinery and export prices not included.)

MOTOR GASOLINE

Prices Effective	May 1	
District:	60-64 Oct.	65 Oct. & Above
N. Y. harbor	6.00 – 6.25	6.00 – 6.25
(a)N. Y. harbor	5.75 – 6.00	5.75 – 6.00
Philadelphia	5.75 – 6.25	5.75 – 6.25
Baltimore	5.75 – 6.00	5.75 – 6.00
Norfolk	6.25 – 6.50	6.25 – 6.50
Wilmington, N. C.	6.00 – 6.50	6.50
Charleston, S. C.	6.00 – 6.50	6.50
Savannah	6.00 – 6.50	6.00 – 6.50
Jacksonville	6.00 – 6.50	6.00 – 6.50
Portland	6.25 – 6.50	6.50 – 7.00
Boston	5.75 – 6.00	6.00 – 6.50
Providence	5.75 – 6.00	6.00 – 6.50

WATER WHITE KEROSINE

District:			
N. Y. harbor	4.375–4.50	Charleston	5.00 –5.25
(a)N. Y. harbor	4.25 –4.375	Savannah	5.00 –5.25
Philadelphia	4.75 –5.00	Jacksonville	5.00 –5.25
Baltimore	4.75 –5.00	Portland	4.375–4.50
Norfolk	5.00 –5.25	Boston	4.375 –4.50
Wilmington, N. C.	5.00 –5.25	Providence	4.375 –4.50

(b) FUEL OILS

	N. Y. harb.	N. Y. harb. barges
No. 1	4.375– 4.50	4.25 – 4.375
Nos. 2-3	3.875– 4.00	3.75
No. 4	3.625	3.50 – 3.75
No. 5	(m)$1.15	.....
No. 6	$0.95 –$1.05	.....

	Phila. dist.	Balt. dist.
No. 1	4.75 – 5.00	4.75 – 5.00
Nos. 2-3	4.25	4.25
No. 4	4.00 – 4.25	4.00 – 4.25
No. 5	$1.15	$1.15
No. 6	$0.95	$0.95

	Bost. dist.	Prov. dist.
No. 1	4.375– 4.50	4.375– 4.50
Nos. 2-3	3.875– 4.00	3.875– 4.00
No. 4	3.75 – 4.00	3.75 – 4.00
No. 5	$1.25	$1.15
No. 6	$0.95 –$1.05	$0.95

District:	(c)Bunker C Fuel	(c) Diesel Oil
N. Y. harbor	$0.95 –$1.05	$1.65
Philadelphia	$0.95	$1.65
Baltimore	$0.95	$1.65
Norfolk	$0.95	$1.65
Charleston	$0.90	$1.65
Savannah	$0.90	$1.785
Jacksonville	$0.90	$1.785
Tampa	$0.85	$1.785
Portland	$1.05	$1.75
Boston	$0.95 –$1.05	$1.65
Providence	$0.95	$1.65

	Gas Oil 28-34 Gravity	Diesel Oil Shore Plants
N. Y. harbor	3.75 – 4.00	3.75 – 4.00
Philadelphia dist	4.25	....
Baltimore dist	4.25	....
Norfolk dist	4.25	....
Savannah dist	....	4.25
Jacksonville dist	....	4.25

Pacific Export

(c) (Quotations are at seaboard, Los Angeles, in cargo lots, cents per gal., except where otherwise noted.)

Prices Effective	May 1	April 24
U. S. Motor, under 65 oct.	4.00 – 4.125	4.00 – 4.125
400 e.p. blend, under 65 oct.	4.125– 4.25	4.125– 4.25
400 e.p. blend 65 oct. & above	4.25 – 4.50	4.25 – 4.50
(d) 38-40 gravity, w.w. kerosine	4.25 – 4.50	4.25 – 4.50
41-43 gravity, w.w. kerosine	4.50 – 4.75	4.50 – 4.75
44 gravity, w.w. kerosine	5.00 – 5.25	5.00 – 5.25
In Cargo lots, per bbl.		
Diesel fuel, 24° & above	$0.95 –$1.05	$0.95 –$1.05
Diesel fuel, under 24°	$0.85 –$0.90	$0.85 –$0.90
(f) 30-34 gravity, diesel (gas oil)	$1.05 –$1.20	$1.05 –$1.20
(g) Grade C fuel oil	$0.58 –$0.65	$0.60 –$0.68

Prices Effective	May 1	April 24
In Ships' Bunkers, or deep tank lots, per bbl.:		
(f) Diesel fuel oil	$1.35 –$1.45	$1.35 –$1.45
(g) Grade C fuel oil	$0.70 –$0.90	$0.70 –$0.90
Cased Goods: (Per case)		
U. S. Motor	$1.35 –$1.45	$1.35 –$1.45
400 e.p. blend, under 65 octane	$1.50 –$1.60	$1.50 –$1.60
375-400 e.p. blend, 65 oct. & above	$1.60 –$1.70	$1.60 –$1.70
(d)40-43 gravity, w.w. kerosine	$1.30 –$1.40	$1.30 –$1.40
Kerosine, p.w.	$1.25 –$1.35	$1.25 –$1.35

New York Export

(Cents per gal. in bbls. FAS. New York)

CYLINDER OILS (Pennsylvania Products)

Bright stock:		
Light, 25 p.t.	22.75	22.75
Neutral oil:		
200 3 color, 25 p.t.	24.00	24.00
150 3 color, 25 p.t.	22.00	22.00
600 s.r., unfiltered	15.50	15.50
650 s.r., unfiltered	17.50	17.50
600 fl., s.r.	18.00	18.00
630 fl., s.r.	20.50	20.50

Wax, Domestic *and* Export

(A.S.T.M. Tests. Melting points, however, are A.M.P., 3 higher than E.M.P. Export prices, FAS., carloads. Domestic prices, FOB. refineries, in bags, carloads, with 0.2c discount allowed for shipment in bulk, except where noted below. Scale solid; fully refined, slabs in bags)

Prices Effective	May 1	
	New York	
	Domestic	Export
124-6 Y.C. scale	2.75 – 2.85	2.75 – 2.85
122-4 W.C. scale	2.80 – 2.85	2.80 – 2.85
124-6 W.C. scale	2.85	2.85
123-5 Fully rfd.	4.00	3.625
125-7 Fully rfd.	4.15	3.75
128-30 Fully rfd.	(h) 4.25	4.00
130-2 Fully rfd.	(h) 4.60	4.25
133-5 Fully rfd.	(h) 4.90	4.65
135-7 Fully rfd.	(h) 5.15	5.00
	New Orleans	
	Domestic	Export
124-6 Y.C. scale	2.75 – 2.85	2.75 – 2.85
122-4 W.C. scale	2.80 – 2.85	2.80 – 2.85
124-6 W.C. scale	2.85	2.85
123-5 Fully rfd.	4.00	3.625
125-7 Fully rfd.	4.15	3.75
128-30 Fully rfd.	(h) 4.25	4.00
130-2 Fully rfd.	(h) 4.60	4.25
133-5 Fully rfd.	(h) 4.90	4.65

Gulf Coast

(FOB. ship at Gulf; minimum 20,000 bbls.; representing traders' opinions)

Prices Effective	May 1	April 24
For Domestic shipment:		
MOTOR GASOLINE		
59 oct. & below	4.375– 4.50	4.375– 4.50
60-64 oct.	4.375– 4.625	4.375– 4.625
65-67 octane	4.75 – 4.875	4.75 – 4.875
68-70 octane	5.00 – 5.25	5.00 – 5.25
FUEL OILS		
No. 1	3.50 – 3.75	3.50 – 3.75
No. 2	3.00 – 3.375	3.00 – 3.375
KEROSINE		
41-43 gravity, w.w.	3.50 – 3.75	3.50 – 3.75
For Export Shipment:		
GASOLINE		

	May 1		
Gasoline:	60-62 Gravity, 400 e.p.	61-63 Gravity, 390 e.p.	64-66 Gravity, 375 e.p.
60 octane	4.375– 4.50	4.375– 4.50	4.375– 4.50
61 octane	4.375– 4.50	4.375– 4.50	4.375– 4.50
62 octane	4.50 – 4.625	4.50 – 4.625	4.50 – 4.625
63 octane	4.50 – 4.625	4.50 – 4.625	4.50 – 4.625
64 octane	4.50 – 4.625	4.50 – 4.625	4.50 – 4.625
65 octane	4.75 – 4.875	4.75 – 4.875	4.75 – 4.875
66 octane	4.75 – 4.875	4.75 – 4.875	4.75 – 4.875
67 octane	4.875– 5.125	4.875– 5.125	4.875– 5.125
68 octane	5.00 – 5.25	5.00 – 5.25	5.00 – 5.25
70 octane	5.125– 5.50	5.125– 5.50	5.125– 5.50

Prices Effective	May 1	April 24
For Export Shipment:		
KEROSINE		
44 gravity, w.w.	3.75 – 4.00	3.75 – 4.00
41-43 gravity, w.w.	3.50 – 3.75	3.50 – 3.75
41-43 gravity, p.w.	3.50 – 3.75	3.50 – 3.75
GAS AND BUNKER OILS		
For Export Shipment:		
Gas Oil (i):		
Below 43 diesel index	3.00 – 3.375	3.00 – 3.375
43-47 diesel index	3.125– 3.50	3.25 – 3.50
48-52 diesel index	3.25 – 3.625	3.375– 3.625
53-57 diesel index	3.375– 3.75	3.50 – 3.75
58 & above	3.50 – 3.875	3.625– 3.875
For Domestic or Export Shipment:		
(c) Diesel Oil	(c)$1.45	$1.45
(c) Grade C bunker oil	(c)$0.75	$0.75
Grade C bunker oil, in cargoes	$0.75	$0.75

MID-CONTINENT LUBRICATING OILS

(Cents per gal. at Gulf; in bbls., FAS.; in bulk, FOB. terminals)

	May 1	
	(j) Barrels	Bulk
190-200 vis. D. 210 brt. stock	22.00	17.80
150-160 vis. D 210 brt. stock:		
0-10 p.p.	18.50 –19.00	14.25 –14.30
10-25 p.p.	18.00 –18.50	13.75 –13.80
150-160 vis. E. 210 brt. stock	18.00	13.80
120 vis. D 210 brt. stock	17.25 –17.50	13.00 –14.50

	May 1 Bulk	April 24 Bulk
180 vis. No. 3 color neutral:		
0-10 p.p.	10.05 –11.50	10.05 –11.50
15-30 p.p.	9.55 –11.00	9.55 –11.00
200 vis. No. 3 color neutral:		
0-10 p.p.	10.80 –12.00	10.80 –12.00
15-30 p.p.	10.30 –11.50	10.30 –11.50
600 s.r. olive green	9.00 –11.25	9.00 –11.25
600 s.r. dark green	7.00 – 9.25	7.00 – 9.25

SOUTH TEXAS LUBRICATING OILS

(Vis. at 100° cold test 0, bulk export shipment, FOB terminals.)

Unfiltered Pale Oils:		
Vis. Color		
100 No. 3	4.50 – 4.75	4.50 – 4.75
200 No. 3	6.00 – 6.25	6.00 – 6.25
300 No. 3	6.50 – 6.75	6.50 – 6.75
500 No. 3½	7.50	7.50
750 No. 4	8.00 – 8.25	8.00 – 8.25
1200 No. 4	8.375– 8.75	8.375– 8.75
2000 No. 4	8.50 – 9.00	8.50 – 9.00
Red Oils:		
Vis. Color		
100 No. 5-6	4.50 – 4.75	4.50 – 4.75
200 No. 5-6	6.00 – 6.25	6.00 – 6.25
300 No. 5-6	6.50 – 6.75	6.50 – 6.75
500 No. 5-6	7.50	7.50
750 No. 5-6	8.00 – 8.25	8.00 – 8.25
1200 No. 5-6	8.375– 8.75	8.375– 8.75
2000 No. 5-6	8.50 – 9.00	8.50 – 9.00

Note: Red oil prices cover oils with green cast; prices for blue cast red oils are slightly lower in some cases.

Tanker Rates

(Approximate freight rates to Continental ports shillings per ton of 2240 lbs., British sterling: U. S. ports cents per bbl.)

Rates Effective May 1

	Crude &/or Fuel		Refined Oil &/or Spirits	
	Last Paid	Owners Ask	Last Paid	Owners Ask
Gulf-U.K./Cont.(k)	12/	11/9-12/6	11/9	11/6-12/6
Aruba-U.K./Cont.(k)	10/6	10/-10/9	9/9	10/-11/
Gulf-N. Atlantic(l) (not E. of N.Y.): Hvy. Crude & fuel, (10 to 19.9 gravity)	25c	25-26c	....	....
Light Crude, (30 Grav. or Lighter)	27c	27-28c	....	....
Gasoline	....	....	30c	30-32c
Kerosine	....	....	32c	32-34c
Light Fuel	....	....	34c	34-36c

(a) In barge lots. (b) Fuel oils meet specifications of U. S. Commercial standards CS12-35. (c) Ships' bunkers. Lighterage, additional at some points, not included. (d) 150 fire point. (e) For San Francisco cargo prices, add 5c per bbl. to cargo prices shown above. (f) Pacific Specification 200. (g) Pacific Specification 400. (h) Shipment in bags or in bulk. (i) Less than ½ of 1% sulfur. (.) Second-hand barrels. (k) Continental ports in range between Bordeaux and Hamburg, both inclusive. (l) Venezuela loading, same rate; Tampico, 2c to 3c per bbl. additional. (m) Low pour test, low viscosity, No. 5 generally quoted at $1.25.

CRUDE OIL MARKETS

Prices in $ per bbl. of 42 U. S. gals. at the well. A. P. I. gravity. Prices are effective as of 7 a. m. of dates as given

EASTERN FIELDS

Posted by Joseph Seep Purchasing Agency
(Effective March 6, 1939, except Corning Jan. 24, 1939)

Penna. Grade Oil in Southwest Penna. Pipe Lines.....$1.65
Penna. Grade Oil in Eureka Pipe Lines (West Virginia).....$1.59
Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O.).....$1.55
Corning Oil in Buckeye Pipe Lines (Ohio)..$1.02

Posted by Other Companies

Tide Water Associated Oil Co.
Bradford-Allegany district (Penna. and N. Y.) (Effective March 6, 1939).....$2.00
*The Pennzoil Co.: (Effective March 6, 1939)
Penna. Grade Oil in National Transit Lines *1.93
*The Pennzoil Co. posts $1.93 in Cochran, Franklin, Hamilton and Doolittle, Pa. fields, prices in other lower districts range down to $1.88 per bbl. at well.

MICHIGAN

Posted by Pure Oil Co.
Midland, Midland County (April 17, 1939)..$0.975

Posted by Simrall Corp.
(Effective April 20, 1939)
Crystal, Greendale, Porter and Wise.....$0.975
Beaverton, Buckeye, Bentley, Edenville.....$0.95
Freeman.....$0.89

(Effective April 18, 1939)
West Branch, Arenac, and equal grades....$0.74

Posted by Bay Pipe Line Corp.
(Effective April 20, 1939)
Bentley and Buckeye.....$0.95
Saginaw and Wise.....$0.975

CENTRAL STATES FIELDS

Posted by Ohio Oil Co.
(Effective Oct. 13, 1938)
Illinois and Princeton.....$1.05
Illinois Basin.....$1.15

Posted by Sohio Corp.
Illinois Basin:
Beecher City (Effective Oct. 13, 1938).....$1.15
Centralia Field:
Congested District (Effective Oct. 1, 1938) .$1.15
Area Outside Congested District (Effective Oct. 13, 1938).....$1.15

Posted by Carter Oil Co.
(Effective Oct. 14, 1938)
Louden, Fayette County, Ill.....$1.15

Posted by Ashland Oil & Transportation Co.
(Effective Oct. 14, 1938)
Somerset Oil in Ashland Lines, Kentucky:
Big Sandy River.....$1.12
Kentucky River.....$1.20

Posted by Stoll Oil Refining Co.
(Effective Nov. 10, 1938)
Stoll Pipe Line Oil (Ky.).....$1.00

Posted by Fordsville Gathering Line, Inc.
(Effective Dec. 24, 1938)
Birk City Field, Ky.....$1.05
(Effective Oct. 13, 1938)
Owensboro District, Ky.....$1.10

CANADIAN FIELDS

Posted by Imperial Oil Limited
Western Ontario
(Effective Oct. 25, 1938)
Petrolia.....$1.90
Oil Springs.....$1.97

Alberta—Turner Valley
(Prices f.o.b. field tankage)
(Effective Jan. 5, 1938)

Crude Oil			
40-40.9°	$1.14	53-53.9	$1.40
41-41.9	1.16	54-54.9	1.42
42-42.9	1.18	55-55.9	1.44
43-43.9	1.20	56-56.9	1.46
44-44.9	1.22	57-57.9	1.48
45-45.9	1.24	58-58.9	1.50
46-46.9	1.26	59-59.9	1.52
47-47.9	1.28	60-60.9	1.54
48-48.9	1.30	61-61.9	1.56
49-49.9	1.32	62-62.9	1.58
50-50.9	1.34	63-63.9	1.60
51-51.9	1.36	64-64.9	1.62
52-52.9	1.38		

Crude Naphtha, 65 grav. & above.....$2.14

Absorption Gasoline
90% Rec., 20 lb. Reid v.p.....$1.94
90% Rec., 17 lb. Reid v.p.....$2.08

MID-CONTINENT
Oklahoma-Kansas

*(Effective Oct. 11 to 22, 1938; and Feb. 16, 1939)

	S. O. Indiana	Carter Magnolia Shell	Continental Texas Co.	Sinclair-Prairie
Below 21°..	$0.70	$0.60	....	....
21-21.9....	.72	.63	....	....
22-22.9....	.74	.66	....	....
23-23.9....	.76	.69	....	....
24-24.9....	.78	.72	....	....
25-25.9....	.80	.75	....	$0.58
26-26.9....	.82	.78	....	.63
27-27.9....	.84	.81	....	.68
28-28.9....	.86	.84	$0.86	.73
29-29.9....	.88	.87	.88	.78
30-30.9....	.90	.90	.90	.82
31-31.9....	.92	.92	.92	.86
32-32.9....	.94	.94	.94	.90
33-33.9....	.96	.96	.96	.96
34-34.9....	.98	.98	.98	.98
35-35.9....	1.00	1.00	1.00	1.00
36-36.9....	1.02	1.02	1.02	1.02
37-37.9....	1.04	1.04	1.04	1.04
38-38.9....	1.06	1.06	1.06	1.06
39-39.9....	1.08	1.08	1.08	1.08
40 & above....	1.10	1.10	1.10	1.10

*Effective by Carter Oil, Oct. 13, posting in Okla. only; Continental Oil, Oct. 11, with lowest grade below 29; Magnolia, Oct. 12, posting in Okla. only; Shell, Oct. 22; Sinclair-Prairie, Feb. 16, 1939; S. O. Indiana, Oct. 17; The Texas Co., Oct. 12.

North-North Central and Central Texas

	Stanolind	†Sinclair-Prairie	*Texas Co. *Continental *Magnolia
Effective 1938:	*Oct. 17*	*Oct. 11*	
Below 21°..	$0.60	....	....
21-21.9....	.62	....	....
22-22.9....	.64	....	....
23-23.9....	.66	....	....
24-24.9....	.68	$0.76	$0.79
25-25.9....	.70	for	for
26-26.9....	.72	oil	oil
27-27.9....	.74	below	below
28-28.9....	.76	29°.	29°.
29-29.9....	.78	.78	.81
30-30.9....	.80	.80	.83
31-31.9....	.82	.82	.85
32-32.9....	.84	.84	.87
33-33.9....	.86	.86	.89
34-34.9....	.88	.88	.91
35-35.9....	.90	.90	.93
36-36.9....	.92	.92	.95
37-37.9....	.94	.94	.97
38-38.9....	.96	.96	.99
39-39.9....	.98	.98	1.01
40 & above.	1.00	1.00	1.03

*Effective Oct. 11, by Continental, in North Tex.; Oct. 12, by Texas Co. in North & North Central Texas. Texas Co.'s lowest grade is 28-28.9, at $0.79; by Magnolia, Dec. 3. in N. and N. Central Texas.
†Sinclair-Prairie prices are in N. Cent. Texas and Mexia.

Jefferson County, Texas

Posted by Magnolia Petroleum Co.

Beaumont
(Effective Oct. 12, 1938)

Below 20°..	$0.79	30-30.9....	$1.08
20-20.9....	.82	31-31.9....	1.10
21-21.9....	.85	32-32.9....	1.12
22-22.9....	.88	33-33.9....	1.14
23-23.9....	.91	34-34.9....	1.16
24-24.9....	.94	35-35.9....	1.18
25-25.9....	.97	36-36.9....	1.20
26-26.9....	1.00	37-37.9....	1.22
27-27.9....	1.02	38-38.9....	1.24
28-28.9....	1.04	39-39.9....	1.26
29-29.9....	1.06	40 & above..	1.28

*For below 21°.
Oct. 11, '38, Stanolind Oil & Gas Co. posted same gravity and price schedule in West Beaumont field as Magnolia.

TEXAS FIELDS

Posted by Humble Oil & Refining Co.
**West Central Texas*
(Effective Dec. 3, 1938)

24-24.9....	$0.71	33-33.9....	$0.89
25-25.9....	.73	34-34.9....	.91
26-26.9....	.75	35-35.9....	.93
27-27.9....	.77	36-36.9....	.95
28-28.9....	.79	37-37.9....	.97
29-29.9....	.81	38-38.9....	.99
30-30.9....	.83	39-39.9....	1.01
31-31.9....	.85	40 & above..	1.03
32-32.9....	.87		

*Includes Brown, Callahan, Coleman, Comanche, Eastland, Fisher, Haskell, Jones, Shackelford, Stephens, Throckmorton and Young counties.
Note: Effective Oct. 1, 1937, Humble prices are based on 100% tank tables at 60F.

**East Central Texas*
(Effective Oct. 11, 1938)

23-23.9....	$0.78	32-32.9....	$0.96
24-24.9....	.80	33-33.9....	.98
25-25.9....	.82	34-34.9....	1.00
26-26.9....	.84	35-35.9....	1.02
27-27.9....	.86	36-36.9....	1.04
28-28.9....	.88	37-37.9....	1.06
29-29.9....	.90	38-38.9....	1.08
30-30.9....	.92	39-39.9....	1.10
31-31.9....	.94	40 and above..	1.12

Posted by Pan American Pipe Line Co.
(Effective Feb. 15, 1939)
Cayuga, Anderson county.....$0.68
*Including Anderson, Cherokee, Limestone, Navarro counties.

PANHANDLE TEXAS

Posted by Humble Oil & Refining Co.
(Effective Dec. 3, 1938)

	Gray County	Carson-Hutchinson
28-28.9....	$0.72	$0.67
29-29.9....	.74	.69
30-30.9....	.76	.71
31-31.9....	.78	.73
32-32.9....	.80	.75
33-33.9....	.82	.77
34-34.9....	.84	.79
35-35.9....	.86	.81
36-36.9....	.88	.83
37-37.9....	.90	.85
38-38.9....	.92	.87
39-39.9....	.94	.89
40 & above..	.96	.91

Effective Oct. 11, 1938, Sinclair Prairie posted same prices in Panhandle Texas as Humble posted Dec. 3. Dec. 3, Magnolia met Humble.

EAST TEXAS

Gulf, Humble, Magnolia, Sinclair Prairie, Stanolind, Texas Co., Tide-Water Associated....$1.10
*Effective Oct. 11 by Humble, Sinclair Prairie, and Stanolind; Oct. 12 Magnolia, Texas, Tide Water; Oct. 13 by Gulf.

NORTHEAST TEXAS

(Posted by Humble, Oct. 11, 1938)
Talco.....$0.55

(Posted by Magnolia, Oct. 12, 1938)
Cass County and Panola County, Tex.:
Same gravity and price schedule as S. O. Louisiana posts for N. La.-Ark. Crude, which see under that company.

(Posted by The Texas Co., Oct. 12, 1938)
Cass County.....$1.05

WEST TEXAS and NEW MEXICO

(a) (Effective Oct. 11, 1938 to March 24, 1939)

	Humble	Magnolia Stanolind	Shell	Texas Co. Sinclair
Below 20°....	$0.53	(b)	$0.53	(c)
20-20.9....	.55	...	.55	...
21-21.9....	.57	...	.57	...
22-22.9....	.59	...	.59	...
23-23.9....	.61	...	.61	...
24-24.9....	.63	...	.63	...
25-25.9....	.65	...	.65	.65
26-26.9....	.67	.67	.67	.67
27-27.9....	.69	.69	.69	.69
28-28.9....	.71	.71	.71	.71
29-29.9....	.73	.73	.73	.73
30-30.9....	.75	.75	.75	.75
31-31.9....	.77	.77	.77	.77
32-32.9....	.79	.79	.79	.79
33-33.9....	.81	.81	.81	.81
34-34.9....	.83	.83	.83	.83
35-35.9....	.85	.85	.85	.85
36-36.9....	.87	.87	.87	.87
37-37.9....	.89	.89	for	for
38-38.9....	.91	.91	oil	oil
39-39.9....	.93	.93	36° &	36° &
40 & above....	.95	.95	above.	above.

Pecos County, West Texas
(Posted by Humble and Shell, Oct. 11, 1938)
Pecos.....$0.78
Yates Shallow Pool (Shell).....65

(a) Effective by Humble Oil & Refg., Shell Oil, Stanolind Oil & Gas, and Sinclair Prairie, Oct. 11, 1938; by Magnolia Petroleum and The Texas Co., Oct. 12, 1938. On March 24, 1939, Sinclair Prairie revised its posting from 40 & above, to 36 & above, at $0.87.
(b) Magnolia posts $0.63 for below 25; $0.65 for 25-25.9. Stanolind posts $0.65 for below 26.
(c) Texas Co. posts $0.65 for below 26; Sinclair Prairie, $0.63 for below 25.
Note: Humble's postings are in these counties: Andrews, Crane, Crockett, Ector, Gaines, Glasscock, Howard, Reagan, Upton, Winkler and Yoakum, West Texas; and Lea county, N. Mex.; Magnolia's are in Crane, Glasscock, Howard, Mitchell, Upton and Winkler; Shell, in Crane, Ector, Glasscock, Howard, Upton, Winkler, Lea; Stanolind in Hendrick field, Winkler county; Texas Co. in Ward, Winkler and Lea; Sinclair in W. Texas and Lea.

Posted by Sinclair Prairie Oil Marketing Co.
(Effective Oct. 11, 1938)
Eddy county, N. Mex.....$0.77

Posted by Continental Oil Co.
(Effective Oct. 11, 1938)
Artesia, Jackson and Maljamar pools, New Mexico: gravity schedule beginning with below 29, at $0.61; 29-29.9, at $0.63; plus 2c differential for each gravity, up to 40 & above, at $0.85.

COLORADO

Posted by Continental Oil Co.
(Effective Oct. 11, 1938)
Ft. Collins and Wellington

Below 29....	$0.81	35-35.9....	$0.95
29-29.9....	.83	36-36.9....	.97
30-30.9....	.85	37-37.9....	.99
31-31.9....	.87	38-38.9....	1.01
32-32.9....	.89	39-39.9....	1.03
33-33.9....	.91	40 & above..	1.05
34-34.9....	.93		

Canon City and Florence, Col.....$0.90

SOUTH AND SOUTHWEST TEXAS

All Shown Below Posted by Humble Oil & Refining Co.

(Effective Oct. 11, 1938)
Carroll, Clark, Darst Creek, Hilbig, Salt Flat and Zoborcski crudes.....$0.96
Van crude.....$0.93
Conroe.....$1.27

(Effective Dec. 3, 1938)
Flour Bluff.....$1.23

Oct. 12, '38, Magnolia met Humble in Darst Creek; posted $0.87 in Luling; $0.99 in Lytton Springs; $1.14 for Cleveland, and $1.02 in Hardin, both in Liberty county, Tex.
Oct. 12, '38, The Texas Co. met Humble in Darst Creek.

**Anahuac and Dickinson*
(Effective Dec. 3, 1938)

Below 20°....	$0.74	30-30.9....	$1.03
20-20.9....	.77	31-31.9....	1.05
21-21.9....	.80	32-32.9....	1.07
22-22.9....	.83	33-33.9....	1.09
23-23.9....	.86	34-34.9....	1.11
24-24.9....	.89	35-35.9....	1.13
25-25.9....	.92	36-36.9....	1.15
26-26.9....	.95	37-37.9....	1.17
27-27.9....	.97	38-38.9....	1.19
28-28.9....	.99	39-39.9....	1.21
29-29.9....	1.01	40 & above..	1.23

*Includes Cedar Point, Fairbanks, Gillock, Hull, Pierce Junction and Raccoon Bend (shallow sand).

Raccoon Bend (Deep sand crude) Tomball and Satsuma
(Effective Dec. 3, 1938)

22-22.9....	$0.95	27-27.9....	$1.05
23-23.9....	.97	28-28.9....	1.07
24-24.9....	.99	29-29.9....	1.09
25-25.9....	1.01	30-30.9....	1.11
26-26.9....	1.03	31-31.9....	1.13

(Continued on next page)

CRUDE OIL MARKETS *(Continued from preceding page)*

32-32.9	$1.15	37-37.9	$1.25
33-33.9	1.17	38-38.9	1.27
34-34.9	1.19	39-39.9	1.29
35-35.9	1.21	40 & above	1.31
36-36.9	1.23		

Dec. 3, Magnolia met above price and gravity schedule in Tomball.

Posted by Humble

***Mirando**

(Effective Dec. 3, 1938)

Below 20°	$0.74	30-30.9	$1.03
20-20.9	.77	31-31.9	1.05
21-21.9	.80	32-32.9	1.07
22-22.9	.83	33-33.9	1.09
23-23.9	.86	34-34.9	1.11
24-24.9	.89	35-35.9	1.13
25-25.9	.92	36-36.9	1.15
26-26.9	.95	37-37.9	1.17
27-27.9	.97	38-38.9	1.19
28-28.9	.99	39-39.9	1.21
29-29.9	1.01	40 & above	1.23

***Includes Duval, Jim Hogg, Jim Wells, Webb and Zapata counties, Tex. and Heyser and Placedo crudes.**

Oct. 12, '38, Texas Co. posted for Duval-Mirando, $0.77 for below 21, plus 3c differential to 26-26.9, $0.95; 27-27.9, $0.97; 28 & above, $0.99.

Dec. 3, Humble's Mirando schedule met by Magnolia.

LOUISIANA-ARKANSAS

Posted by Standard Oil Co. of Louisiana

(Effective Oct. 5, 1938)

	*N. La.-Ark.	†Columbia County, Ark.	‡South Louisiana
Below 21°	$0.73	$0.66	$0.74
21-21.9	for	for	.77
22-22.9	oil	oil	.80
23-23.9	Below	Below	.83
24-24.9	25°	25°	.86
25-25.9	$0.75	$0.68	.89
26-26.9	.77	.70	.92
27-27.9	.79	.72	.94
28-28.9	.81	.74	.96
29-29.9	.83	.76	.98
30-30.9	.85	.78	1.00
31-31.9	.87	.80	1.02
32-32.9	.89	.82	1.04
33-33.9	.91	.84	1.06
34-34.9	.93	.86	1.08
35-35.9	.95	.88	1.10
36-36.9	.97	.90	1.12
37-37.9	.99	.92	1.14
38-38.9	1.01	.94	1.16
39-39.9	1.03	.96	1.18
40 & above	1.05	.98	1.20

(Effective Oct. 5, 1938)

Smackover, Ark. $0.73

Posted by Arkansas Fuel Oil Corp.

(Effective Jan. 28, 1937)

Urania, La. $1.02

Posted by Continental Oil Co.

(Effective Oct. 11, 1938)

Tepetate and Ville Platte, La. $1.03

(Effective Jan. 1, 1939)

Abbeville, La.

Below 36	$0.92	38-38.9	$0.98
36-36.9	.94	39-39.9	1.00
37-37.9	.96	40 & above	1.02

Posted by Caddo Crude Oil Purchasing Corp.

(Effective April 19, 1939)

Allison area, Shreveport field $1.05

(Effective April 29, 1939)

Lisbon, N. La.

Below 34	$0.73	35 & above	$0.77
34-34.9	.75		

***Includes Bunkie, Caddo, Carterville, DeSoto, Homer, Haynesville, Rodessa, Sabine and Sarepta, in N. La.; El Dorado and Miller County, Ark. (latter is Ark. part of Rodessa field).**

Note: S. O. Louisiana prices in all La.-Ark. fields, effective Oct. 5, 1938, are on 100% tank table basis.

†Includes Buckner, Magnolia, and Village pools.

‡Includes these fields: Baton Rouge, Bayou, Choctaw, Cheneyville, Darrow, Jeanerette, Lirette, N. Crowley and Roanoke.

Oct. 12, 1938, Magnolia Petroleum and The Texas Co. posted same gravity and price schedule as S. O. La. posts in N. La.-Ark. in these fields: Magnolia, in Bull Bayou, Cotton Valley, Haynesville, Pine Island, and Rodessa, La., and Eldorado and Rainbow, Ark.; Texas Co. in N. La. Both also met S. O. La. in Smackover. Texas Co. posted $1.24 for Garden Island, La. and $1.04 for Lafitte, La.

*GULF COASTAL FIELDS

Posted by Humble Oil & Refining Co.

†(Effective Oct. 11, 1938)

Below 20	$0.79	30-30.9	$1.08
20-20.9	.82	31-31.9	1.10
21-21.9	.85	32-32.9	1.12
22-22.9	.88	33-33.9	1.14
23-23.9	.91	34-34.9	1.16
24-24.9	.94	35-35.9	1.18
25-25.9	.97	36-36.9	1.20
26-26.9	1.00	37-37.9	1.22
27-27.9	1.02	38-38.9	1.24
28-28.9	1.04	39-39.9	1.26
29-29.9	1.06	40 & above	1.28

Polk County, Tex.

(Posted by Shell Oil Co., Inc.)

Livingston Area (Effective Oct. 11, '38) $1.10

Schwab Area (Effective Feb. 20, '39) 1.00

†Effective Dec. 3, 1938, gravities up to 45 & above discontinued in Refugio, Saxet, Greta, O'Connor-McFadden, Taft, Plymouth and Tom O'Connor fields.

***Humble's prices apply in these Texas fields: Amelia, Clear Lake, Goose Creek, Mykawa, Sugarland, Thompsons, Webster and West Columbia; also Refugio, Saxet, Greta, O'Connor-McFadden, Taft, Plymouth and Tom O'Connor fields.**

Oct. 11, 1938, Stanolind posted in Clinton, Hastings, High Island, So. Houston, and Spindletop, same prices as Humble in Texas Gulf Coast fields, except that Stanolind's lowest grade is below 21, at $0.82.

Oct. 12, 1938, The Texas Co. posted for Texas & La. Gulf Coast crude: $0.82 for below 21 plus 3c to 26-26.9, which is $1; from there on, 2c, to 34 & above, which is $1.16. In Refugio, same as other Gulf Coast, except highest gravity is 28 & above, $1.04.

Effective Oct. 11, 1938, Sinclair Prairie met Humble's Gulf Coast price & gravity schedule.

ROCKY MOUNTAIN FIELDS

Posted by Stanolind Oil & Gas Co.

(Effective Oct. 11, 1938)

Salt Creek, (except Tensleep crude), Midway and Dutton Creek, Wyo., same schedule as Stanolind posts in Oklahoma-Kansas, ranging from $0.86 to $1.10, which see under Mid-Continent crude on previous page.

Tensleep, Salt Creek field	$0.646
Iles, light, Col	0.98
Iles, heavy	0.92
Elk Basin, light	0.90
Grass Creek, light	0.90
Frannie light	0.55
Grass Creek, heavy	0.40
Hamilton Dome, Wyo	0.35
Frannie heavy	0.42

Posted by Ohio Oil Co.

(Effective Oct. 11, 1938)

Elk Basin, Wyo	$0.90
Grass Creek, light	0.90
Rock Creek	1.00
Lance Creek	0.77
Dry Creek, Mont.	0.92

(Effective May 1, 1938)

Grass Creek, heavy $0.50

(Effective Nov. 16, 1937)

Sunburst, Mont. $0.90

Posted by Continental Oil Co.

(Effective Oct. 11, 1938)

Cat Creek, Mont.	$1.10
Big Muddy, Wyo.	0.98
Lance Creek, Wyo.	0.77

CALIFORNIA, *Posted by Standard Oil of California*

All gravities above those quoted take highest price offered in the field. Prices effective Feb. 26, 1936, except Huntington Beach, Playa del Rey, Santa Fe Springs, Kern Front, Signal Hill (Long Beach) effective March 7, 1936; Elk Hills effective June 22, 1936; Lakeview Area, Aug. 19, 1936; El Segundo and Wilmington, Oct. 15, 1937; Greeley-Canal, July 9, 1938; Santa Maria Valley, by Union Oil, Oct. 15, 1938.

Gravity	Signal Hill (Long Beach) El Segundo †Wilmington	Seal Beach	Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda Brea Canon	Athens Rosecrans	Dominguez	Torrance	Richfield	Whittier East Coyote (La Habra)	Montebello	West Coyote Hills	Santa Fe Springs	‡Newhall and others	Mountain View	Elk Hills	Buena Vista Hills Midway-Sunset Lakeview Area	Greeley-Canal (Kern County)	Lost Hills	Coalinga	Wheeler Ridge	Santa Maria (Union Oil)
13-13.9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	$0.63
14-14.9	$0.80	$0.79	$0.74	$0.78	$0.79	$0.80	$0.76	....	....	$0.80	$0.76	$0.76	$0.77	$0.78	....	$0.70	....	$0.70	$0.70	....	$0.70	$0.70	....	.65
15-15.9	.80	.79	.74	.78	.79	.80	.76	....	....	.80	.76	.76	.77	.78	....	.70	....	.70	.70	....	.70	.70	....	.68
16-16.9	.80	.79	.74	.78	.79	.80	.76	....	....	.80	.76	.76	.77	.78	....	.70	....	.70	.70	....	.70	.70	....	.70
17-17.9	.80	.79	.74	.78	.81	.80	.76	....	....	.80	.76	.76	.77	.78	....	.70	....	.70	.70	....	.70	.70	....	.70
18-18.9	.80	.79	.74	.78	.84	.80	.78	....	....	.82	.76	.76	.77	.78	....	.70	....	.70	.70	....	.70	.70	....	....
19-19.9	.82	.79	.74	.82	.87	.84	.81	....	....	.85	.76	.78	.77	.78	....	.70	.70	.74	.74	....	.74	.71	.70	....
20-20.9	.85	.79	.74	.85	.90	.88	.84	....	....	.88	.78	.82	.77	.80	....	....	.70	.78	.78	....	.78	.72	.70	....
21-21.9	.88	.79	.74	.89	.93	.93	.88	....	....	.91	.80	.85	.77	.84	.78	....	.73	.82	.82	....	.82	.74	.70	....
22-22.9	.92	.82	.74	.92	.96	.98	.92	....	....	.93	.84	.89	.79	.88	.78	....	.77	.87	.87	....	.86	.78	.72	....
23-23.9	.95	.86	.77	.96	.99	1.02	.96	.84	.79	.96	.88	.93	.82	.92	.78	....	.80	.92	.92	....	.90	.82	.76	....
24-24.9	.99	.91	.80	1.00	1.02	1.06	.99	.88	.81	.99	.91	.96	.85	.96	.82	....	.84	.97	.97	....	.94	.86	.79	....
25-25.9	1.03	.95	.82	1.03	1.05	1.11	1.03	.93	.83	1.02	.95	....	.89	.99	.86	....	.88	1.01	1.01	....	.98	.90	.83	....
26-26.9	1.06	1.00	.85	1.07	1.09	1.16	1.06	.98	.86	1.05	.98	....	.92	1.03	.90	....	.91	1.06	1.06	....	1.02	....	....	....
27-27.9	1.10	1.05	.88	1.11	1.12	....	1.10	1.03	.88	....	1.02	....	.96	1.06	.95	....	.95	1.10	1.10	$0.91	1.06	....	....	....
28-28.9	1.14	1.10	.90	1.14	1.15	....	1.14	1.07	.90	....	1.06	....	.99	1.10	.99	....	.99	1.15	1.15	.94	1.10	....	....	....
29-29.9	1.17	1.15	.93	1.18	1.18	Pipe	1.17	1.12	.93	....	1.09	....	1.03	1.14	1.03	....	1.02	1.20	1.20	.98	1.14	....	....	....
30-30.9	1.21	1.19	.95	1.22	1.21		1.21	1.17	.95	....	....	....	1.07	1.17	1.08	....	1.06	1.25	1.25	1.02	1.18	....	....	....
31-31.9				....	1.24		1.24	1.22	.97	....	....	....	1.11	1.21	1.12	....	1.09	1.29	1.29	1.06				....
32-32.9	*Ellwood Terrace			....	1.27		1.27	1.27	1.00	....	....	....	1.14	1.25	1.16	....	1.13	1.34	1.34	1.09	Kettleman Hills			....
33-33.9	....	1.28	....	....	....		....	1.32	....	....	....	....	1.18	1.28	1.20	....	1.17	1.38	1.38	1.13	....	1.19	....	....
34-34.9	....	1.32	....	....	....		....	1.37	....	....	....	....	1.22	1.32	1.25	....	1.20	....	....	1.17	....	1.23	....	....
35-35.9	....	1.35	....	....	....		....	1.42	....	....	....	....	1.25	....	1.29	....	....	....	....	1.20	....	1.27	....	....
36-36.9	....	1.39	....	....	....		....	1.46	....	....	....	....	1.29	....	1.33	....	....	....	....	1.24	....	1.31	....	....
37-37.9	....	1.43	....	....	....		....	1.51	....	....	....	....	1.32	....	1.37	....	....	....	....	1.28	....	1.35	....	....
38-38.9	....	....	....	....	....		....	1.56	....	....	....	....	1.36	....	1.42	....	....	....	....	1.31	....	1.39	....	....
39-39.9	....	....	....	....	....	F.O.B. Standard	....	1.61	....	....	....	....	1.40	....	....	....	....	....	....	1.35	....	1.43	....	....
40-40.9	....	....	....	....	....	Line	....	1.66	....	....	....	....	1.43	....	....	....	....	....	....	1.39	....	....	....	....
41-41.9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1.43	....	....	....	....
42-42.9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1.46	....	....	....	....
43-43.9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1.50	....	....	....	....
44-44.9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1.54	....	....	....	....
45-45.9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1.57	....	....	....	....
46-46.9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1.61	....	....	....	....
47-47.9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1.65	....	....	....	....
48-48.9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1.68	....	....	....	....

*F. o. b. ship.

‡Also McKittrick, Kern River. Kern Front and Round Mountain $0.70 thru 19.9 gravity; no higher gravity quoted.

†Wilmington prices differ on gravities below 18.9. Prices are: 14-16.9, $0.75; 17-17.9, $0.77; and 18-18.9, $0.79; rest of schedule same as Signal Hill.

Index to Advertisers

This index is published as a convenience to the reader. Every care is taken to make it accurate, but National Petroleum News assumes no responsibility for errors or omissions.

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Preferably one who has had experience with sales and advertising promotion in the oil industry, particularly through the middle west. He should have created sales and advertising himself and also spent time in the field contacting jobbers, major company managers and agents and dealers.

The company inserting this advertisement is not an oil company but is directly allied with the oil business and is a first class, responsible organization.

Please give information as to experience and training in order to permit intelligent preliminary consideration and thus avoid unnecessary correspondence. No personal interviews will be given.

Address Box 105
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Copy must reach us not later than Saturday preceding date of issue.

All advertisements carried on this page are payable in advance.

"STRICTLY PERSONAL"

R. W. McDowell, vice president in charge of marketing for the Mid-Continent Petroleum Corp., sailed last week for a 30-day business trip to England, France and other continental countries. He was accompanied by Mrs. McDowell.

* * *

L. W. Bennett, treasurer of Sunray Oil Co., with Mrs. Bennett, are visiting at Wilmington, Cal. While in California they will revisit California Institute of Technology, and also see Golden Gate Exposition at San Francisco.

* * *

J. F. Banks has been named acting traffic manager of National Refining Co., filling the vacancy caused by recent death of **E. E. Harrington,** who had been with National Refining for more than 25 years.

* * *

F. S. Grimes, formerly sales representative of the Imperial Refining Co. recently became affiliated with Rapid Oil Products Co. at Grand Rapids, Mich.

* * *

W. H. Noble, sales department of The Texas Co., will take office May 1 as a member of City Council of Dallas, Texas.

* * *

Vincent Nolan, sales manager for Egyptian Refining Co., Centralia, Illinois, was in Chicago last week on business.

* * *

A. K. Krueger, for 15 years secretary and treasurer of Acme Petroleum Co. recently resigned to become affiliated with Carson Petroleum Co. as sales representative.

* * *

John C. Tarr, sales manager Tarr & McComb Oil Co., accompanied by Mrs. Tarr will leave Los Angeles May 5 for a month's vacation which will include a visit to their Wisconsin birthplaces, the New York World's Fair, Washington, D. C., and a boat trip from New York to New Orleans on the return to California.

* * *

In annual meeting April 26, membership of the Oil Producers Agency of California elected **L. L. Aubert,** general manager of Bankline Oil Co., as president for the ensuing year. Aubert is also a member of the Central Committee of California Oil Operators and chairman of the allocation sub-committee of that group.

Newly elected vice presidents include **Maurice Machris,** Bandini Petroleum Co.; **Jas. H. Lewis,** Sunset Oil Co.; **Angus Crites,** Anchor Oil Co.; **W. L. Adkisson,** Taft Investment Co. **W. A. Russell,** Seaboard Oil Corp., was elected secretary-treasurer. **Rush M. Blodget** was re-elected executive vice-president for the eighth consecutive year.

* * *

Board of directors of Union Oil Co. have elected **M. G. Kerr,** comptroller, and **I. J. Hancock,** assistant comptroller, of the company to succeed **George H. Forster,** retired and **A. H. Hand,** resigned.

* * *

Three executives of southwestern oil companies were on the program of the one day meeting of the Southwestern Salesmanagers' Conference held in Tulsa April 19. They were **Carl Wollner,** president of Panther Oil & Grease Mfg. Co., Fort Worth, Texas.; **George Biggs,** manager of sales promotion and training, Continental Oil Co., Ponca City, Okla., and **Walter J. Kinderman,** sales promotion department, Phillips Petroleum Co., Bartlesville, Okla. Wollner, who is past president of the Fort Worth Sales Managers' Club and a director of the National Federation of Sales executives, spoke on "Why Sales Managers Succeed." Biggs discussed "Selection and Training of Salesmen." Kinderman's subject was, "Sales Contests and Salesmen's Compensations."

* * *

Frank Phillips, board chairman of Phillips Petroleum Company has announced reorganization of his company's land department, with **H. C. Charles** and **J. S. Williams** as assistant superintendents in charge of the two divisions into which Phillips' properties have been divided. Both will be stationed at Bartlesville, Okahoma.

L. K. Eastman, formerly division land man at Wichita Falls, Texas has been transferred to the Oklahoma City division. **J. W. Rettig,** formerly division land man at St. Joseph, Missouri has been transferred to the Wichita Falls, Texas Division and **H. A. Knight,** formerly in the Oklahoma City land department has been named division land man for the St. Joseph division. **O. H. Whitcomb** of Bartlesville, formerly head of the title division, has been made special representative and will be assigned special land work in all divisions. **R. L. Powell,** formerly in charge of the records division, has been made chief clerk and will supervise operation of the record and title division.

* * *

President Roosevelt's appointment of **William Leiserson** as a member of the National Labor Relations Board brings him together again with **Charles Fahy,** NLRB general counsel. Both of these men were prominent in administration of the NIRA oil code. Fahy was chairman of the Petroleum Administrative Board while Leiserson was chairman of the Petroleum Labor Policy Board.

* * *

T. R. Vaughn, independent tank car marketer for the past five years, has recently closed his Chicago office and will become sales representative for a refinery as yet undisclosed.

* * *

E. M. Smith, United Gas Pipe Line Co., will preside at the 1939 convention of the petroleum electrical industry at Houston, May 2 to 5. **D. W. Sims,** Ponca City, of Continental Oil Co., vice-president, while **Harry E. Browne,** pipeline department of Sinclair Refining Co., is secretary-treasurer.

* * *

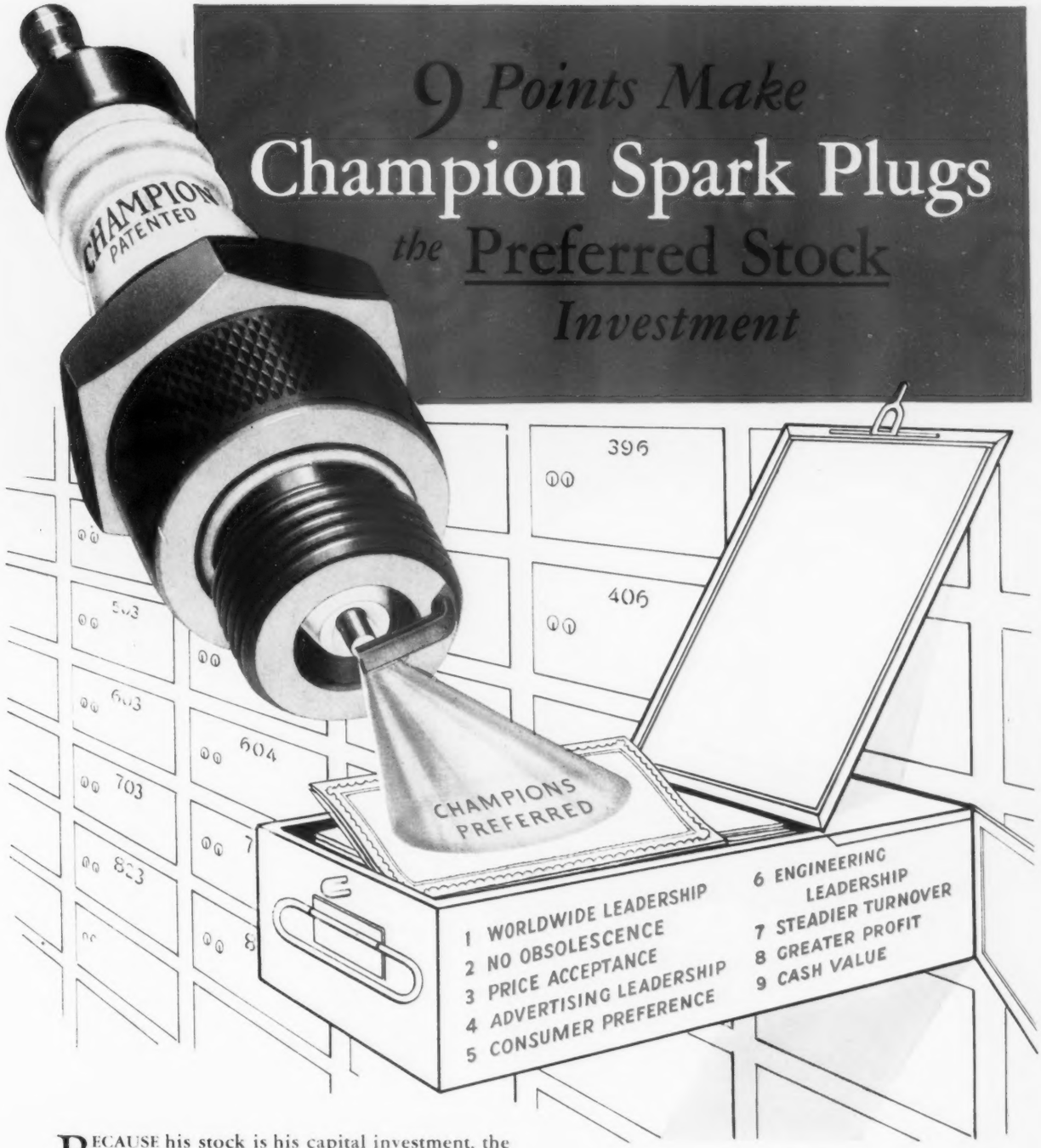
Youngest member of the Dixie Distributors is **Charles B. Dobey,** 10, Home Oil Co., Prague, Okla.

* * *

The Joseph A. Holmes Safety Association at its recent meeting in Washington awarded certificates of merit to **L. C. Font, D. H. Rogillio** and **F. W. Boeneke,** all employes of Standard Oil Co. of Louisiana's Baton Rouge refinery for the resuscitation of **William S. Webster,** a victim of electrical shock on June 16 last year.

* * *

Fifteen new members have been added to American Petroleum Institute's central committee on public relations. They are: **H. H. Anderson,** of St. Louis, Shell Oil Co., Inc.; **Francis H. Casey,** of Milwaukee, Wadhams Oil Co.; **K. E. Cook,** of New York, Standard Oil Co. of New Jersey; **N. B. Curtice,** of Minneapolis, The Pure Oil Co.; **John Day,** of Tulsa, Western Petroleum Refiners Association; **F. E. Foster,** of Los Angeles, California Oil & Gas Association; **Clarel B. Mapes,** of Tulsa, Mid-Continent Oil & Gas Association; **W. A. O'Day,** of Baltimore, The American Oil Co.; **E. H. Poe,** of New York, American Gas Association; **J. C. Richdale,** of Boston, Colonial-Beacon Oil Co.; **Paul Truesdell,** of Chicago, Universal Oil Products Co.; **Robert A. Warfel,** of Columbus, Ohio Petroleum Marketers Association. **R. R. Griffin,** of New York, Shell Union Oil Corp.; **R. L. Heaton,** of Louisville, Standard Oil Co. of Kentucky; and **J. W. S. Bessonette,** of Chicago, The Pure Oil Co.



BECAUSE his stock is his capital investment, the thrifty dealer selects lines that are recognized for their asset value, and full profit opportunities.

Champion Spark Plugs are recognized by dealers everywhere as *the preferred stock* investment in their line. No other spark plug combines all of the nine points which make Champions *the preferred stock* investment.

Now Champion has added to its long list of exclusive and patented features, the Sillment seal which makes them permanently free from troublesome leakage common to ordinary spark plugs. This feature gives demonstrable evidence of their ability to produce better engine performance—Champion dealers everywhere are cashing in by demonstrating their exclusive leakproof qualities.

Champion Spark Plugs produce better sales, turnover and profits, and it is an established fact that they produce better engine performance. Your service stock constitutes your assets, so invest wisely by choosing Champions, *the preferred stock* investment.

IT'S THRIFTY TO STOCK AND SELL CHAMPIONS

Texas Signs Up for Two More Years As Member of Interstate Oil Compact

Governor W. Lee O'Daniel of Texas signs the bill for two more years' participation by the Lone Star State in the Interstate Oil Compact, while looking on is Colonel Ernest O. Thompson, member of the Texas Railroad Commission and chairman of the oil compact commission. Colonel Thompson was recently designated by Governor O'Daniel to continue as Texas' representative on the compact commission.

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